

# Responsive Management™



## **COMMUNICATING TO THE NORTHEAST PUBLIC ABOUT FOREST RESOURCES AND THE FOREST STEWARDSHIP PROJECT: RESEARCH-BASED COMMUNICATIONS STRATEGIES**

**Conducted for the Northeastern Area Association of State Foresters**

**by Responsive Management**

**2011**

# **COMMUNICATING TO THE NORTHEAST PUBLIC ABOUT FOREST RESOURCES AND THE FOREST STEWARDSHIP PROJECT: RESEARCH-BASED COMMUNICATIONS STRATEGIES**

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## EXECUTIVE SUMMARY

This study was conducted for the Northeastern Area Association of State Foresters (NAASF) to develop effective communications, outreach, and marketing strategies for the NAASF's Forest Stewardship Project. Research for the study was conducted with residents in the U.S. Forest Service's Northeastern Area states, which are Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin.

Authorized by the Cooperative Forestry Assistance Act of 1978, the Forest Stewardship Project provides technical assistance through state agency partners to landowners of about 31 million acres of non-industrial private forest land. The Forest Stewardship Project provides private landowners with information for managing their forests for a variety of goals. Participation in the Forest Stewardship Project is open to any non-industrial private forest landowner committed to the active management and stewardship of a forested property for at least 10 years.

Three primary research components made up this study. The first was four focus groups conducted with Northeastern Area residents in Ohio, New York, New Hampshire, and Wisconsin. The second component entailed a Web-based survey of State Foresters and Cooperative Forest Management Committee Members. A telephone survey of Northeastern Area residents made up the third component of the study.

The implications of the research detailed below are synthesized from all of the research. The research methodology is detailed in the report. The full findings are included in the report; this Executive Summary includes only the implications of the data.

➤ **In broad terms, forest stewardship should find a receptive audience, as the large majority of Northeastern Area residents hold positive attitudes about forest stewardship.**

- With 77% of Northeastern Area residents giving a high rating (an "8" or higher on a "0" to "10" scale) to the importance that stewardship of privately owned forests should be, it would appear that there is a receptive audience to the message of forest stewardship. Only a small percentage—no more than 23%—do not give a high rating of importance. For that latter group who give low ratings, men are more likely than women to give a low rating. Additionally, the lower education group is also more likely to give a low rating.
- Likewise, with 59% of residents giving a high rating to the importance of privately owned forests to overall forest health and forest quality in their state, it again appears that there is a receptive audience to forest stewardship. Nonetheless, the data suggest that establishing the connection between *privately owned forests* and *overall forest health* is necessary, which will be discussed further on.
- Also, 70% give a high rating of the importance of privately owned forests to the ecosystem of the state, more evidence of a widely receptive audience for forest stewardship.

- **Despite the receptive audience for forest stewardship, the data suggest that establishing the connection between *privately* owned forests and *overall forest health* will garner an even greater audience.**
  - While the evidence suggests that there is a wide audience for forest stewardship in general terms, there are some people who are rating the importance of stewardship of privately owned forests high but *not* rating the importance of privately owned forests to overall forest health high. In short, they are not making the connection between privately owned forests and overall forest health (77% give a rating of how important stewardship of privately owned forests should be, but only 59% give a high rating to the importance of privately owned forests to overall forest health in their state).
  - Also, Northeastern Area residents are split regarding the connection between stewardship of privately owned forests and their own *personal health and well-being*. While 56% give a high rating to the importance of privately owned forests to their *personal* health and quality of life, this leaves a substantial percentage who do not give it a high rating.
  - In the focus groups, some participants had to be reminded that they benefit from privately owned forests, with typical comments being, “Oh yeah. I guess I do benefit from clean air.” Other reactions simply substituted clean water or lumber for their homes in that statement in their being reminded of the benefits they derive from privately owned forests.
  
- **Also in broad terms, emphasizing the ecological and somewhat intangible benefits of privately owned forests should resonate, including clean air, clean water, and fish and wildlife habitat. In general, ecological messages are rated higher by Northeastern Area residents than are messages that emphasize human benefits.**
  - Clean water and clean air as benefits of privately owned forests resonated well in the surveys as well as in the focus groups. In a list of 8 potential benefits of privately owned forests, the top-rated benefit was clean air. Note that clean air as a benefit that resonates is undervalued by State Foresters and Committee members: they did not rate clean air commensurate with the general population’s ratings of that benefit.
  - The aforementioned list that had clean air at the top also had in its top tier clean water and fish and wildlife habitat. These resonated better than do recreational benefits, timber and lumber, and other forest products.
  - Another demonstration of the resonance of ecological values is in the differences in percentage who give high importance ratings to two questions. Residents’ ratings of the importance of privately owned forests to *overall health and quality of forests in their state* lag behind residents’ ratings of the importance of privately owned forests for the *ecosystem in their state*. On the former question, 56% give a high rating to the importance of privately owned forests to *overall forest health*, while on the latter question 70% give a high rating of the importance of privately owned forests to the *ecosystem* of the state.
  
- **Water resonates well. The benefit of clean water is highly rated. Messages encouraging support of forest stewardship that include water themes, for the most part, do well.**
  - A list of 14 statements as reasons to support stewardship of privately owned forests was read to Northeastern Area residents, and 3 of the top 4 pertained to water:

- 1st: The Northeast contains more than 20% of the world's fresh surface water and 84% of the nation's fresh surface water.
  - 2nd: Forests protect drinking water, filter pollutants, and hold water in forest soils.
  - 4th: In the Northeast, more than 52 million people depend on water supplies that are largely protected by forested lands.
  - It is worth noting that State Foresters' ratings of agency performance overall (each Forester rated only his own agency) in addressing clean water as a benefit of privately owned forests was quite low, suggesting that their agency's performance in getting the clean water message across needs to be improved in general.
- **Encouragement to become involved in or support forest stewardship based on appeals to help threatened and endangered species resonates well.**
- This is an ecological value that resonates well. In the list of 14 messages that were tested, third in the ranking is that "private land serves as critical habitat for many of the nation's endangered species," which reflects an ecological value.
- **That forests be *healthy* resonates better than that forests be *productive*.**
- In the list of seven characteristics that forests should be, that forests be healthy was the top-ranked item, and that forests be productive was the lowest ranked.
- **The above finding notwithstanding, prompting people to become involved in or support forest stewardship by saying that the forests in their state are *not healthy* will lack resonance with most people.**
- An overwhelming majority (80%) of residents think the forests in their state are healthy, so pleas based on the forest being unhealthy will not resonate well. Furthermore, the crosstabulations found no marked difference in ratings of importance of stewardship based on a division into groups based on opinions on the health of the forest anyway. In other words, thinking the forest is unhealthy is not a prerequisite of being concerned, and most people think the forests in their state are healthy.
- **The term, *forest stewardship*, has a positive connotation to the vast majority of Northeastern Area residents. In an open-ended question, only 1% give a negative reaction. However, about a quarter of people (26%) do not know its meaning.**
- While the news is good that reactions are mostly positive, there exists a substantial portion of the populace that does not know the word. Note that a danger in not getting to these people is that whoever does get to them works with a blank slate in defining the term to them and could set a definition that does a disservice to the Forest Stewardship Project.
- **The term, *sustainable management*, had a mixed reaction. There are some problems with using the term, with some people *not* holding a positive view. It is probably useful to subtly define it when using it or to include words that put the term into context and allow people to get the meaning.**
- While the solid majority of Northeastern Area residents (66%) have a positive reaction to the term, *sustainable management*, there are some with a negative reaction (5%) and a

- sizeable percentage who had a neutral reaction (25%) or do not know (3%)—making about a third of respondents who do *not* have a positive reaction.
- More educated people react better to the term than do those in the lower educational strata.
  - Other demographic groups who are more likely to *not* have a positive reaction than the population as a whole include women and younger people.
- **Balance resonates well, particularly in discussions of natural resources. In this case, people, for the most part, want to see a balance of uses and a balance between conserving the forests and using them.**
- Rather than want to see the forests preserved, with no use made of them, the general public appears to want to see conservation with some wise use. A key component of talking about the Forest Stewardship Project is that the general public thinks that the program allows use of the forests. While economic messages do not resonate well compared to ecological messages in encouraging support of forest stewardship, people nonetheless want to see the forests used. There is no wholesale opposition to using forests for timber production, although the focus groups suggested that clear cutting is not well supported.
- **While the word, *conservation*, resonates well, it is important that people do *not* perceive that the program completely bans use of the forests. Again, *balance* works well as a corollary concept with *conservation*.**
- Although *conservation* resonates well, many people expressed concern that conservation not become a call for absolutely no use of forests.
  - Although not directly assessed in this survey (because Responsive Management has already done so in other studies), *conservationist* has a better connotation among the general public than does the *environmentalist*. For some people, it seems the latter term has become associated with extremism and with disallowing any use of natural resources.
- **An interesting nuance of *privately owned* as opposed to *private* was raised in one of the focus groups. Use of *privately owned* may be better than *private*, the latter term having an elitist (in the negative way) connotation.**
- As a focus group participant indicated, the former is benign, while the latter seemed to this focus group participant to imply a rich person owning his own land to which he scrupulously restricts access.
- **Economic messages do not do well, nor do economic issues appear to greatly affect the general population's feelings about forests.**
- Of the 14 messages previously discussed that were posited as possible reasons for supporting the stewardship of privately owned forests, low to the middle in the ranking were those that pertained to economics. These include:
    - Nearly a quarter of all wood produced in the U.S. comes from the Northeast. (Low ranked.)
    - Forest-related jobs rank in the top 10 in economic importance in every state in the Northeast. (In the middle of the ranking.)

- An interesting crosstabulation of responses to the question about the portion of rural manufacturing jobs associated with forests and the question about ratings of the importance of stewardship of privately owned forests found no correlations where, intuitively, one might think there should be. First of all, the overwhelming majority of Northeastern Area residents underestimate the portion of rural manufacturing jobs that are related to forests. However, they are the group giving higher ratings to the importance of the stewardship of privately owned forests, whereas one might think the people who properly estimate or overestimate the importance of forests to rural manufacturing would value forest stewardship more. This was *not* the case. In other words, the study did *not* find that people who value the economic importance of privately owned forests to be more likely to value the stewardship of privately owned forests.
- **The word, *investment*, does not resonate well.**
  - A list of five things for which privately owned forests are important was read to Northeastern Area residents (e.g., privately owned forests are important for wildlife). Ecological values are at the top (wildlife, habitat), above “an investment in the future.” While “investment” is not in the lower end of the ranking, it is anemically received.
  - The focus groups suggested some ambivalence about the word, “investment.” Focus group participants tended to think of the word as vague or meaningless without qualifiers with it. An investment for whom? The word also had a somewhat negative connotation when it was thought to be an investment designed for a profit. An investment for an altruistic reason was better, but the word does not have a ready association with altruism.
- **The words, *conserve* and *preserve*, are not perceived in the same way as they are among land-use professionals. These words should not be used in precise ways in generalized outreach materials without being defined.**
  - In the focus groups and survey of Northeastern Area residents, some people thought that the two words were essentially the same. Others had completely opposite views from one another regarding their meanings. Overall, there was no consensus in the meanings, and the words are open to wide interpretation because of this. In generalized communications, it would probably be best to *not* use them in a precise, land-use sense.
- **In general, negative messages as a prompt to encourage people to support forest stewardship do not resonate well. Use positive messages as reasons for engaging in forest stewardship.**
  - The plea to participate in forest stewardship because there are not enough forests did not resonate. Messages that discussed how urban sprawl will result if forest stewardship is *not* practiced did not do well, in other words, “bad things will happen if...” type messages did not resonate well.

- **An important point in discussing words and terms that resonate relates to tract size to be considered a forest. The term, *forest*, does not properly convey the meaning of forest as thought of by the NAASF. It appears that the NAASF's threshold is smaller than the general public's threshold. If the terms, *woods* or *woodlot*, were worked into messages about forest stewardship, the messages may resonate with more people.**
  - Among survey respondents in the resident survey, the median tract size threshold before a tract can said to be a forest is 40 acres. Furthermore, only 31% of people think that a tract size of 20 acres would be large enough to be considered a forest, while 40% did not think it to be large enough (the remainder saying "don't know"). Obviously, using the term, *forest*, will exclude many people from the conversation who should be included.
  - *Woods* and *woodlot* were both terms that are more inclusive to the locations of interest to the Forest Stewardship Project. The bottom line is to encourage people to think in smaller terms.
  
- **Stating facts of ownership or facts about the amount of the Northeastern Area that is forested do not resonate as reasons for supporting stewardship of privately owned forests.**
  - Of the 14 messages previously discussed that were posited as possible reasons for supporting the stewardship of privately owned forests, low in the ranking were those that stated facts about forests or forest stewardship. These include:
    - More than 90% of forests in the Northeastern and Midwestern U.S. are non-federal. (This was the lowest ranked statement.)
    - The Northeastern and Midwestern U.S. have one of the largest concentrations of privately owned forests in the world, with 130 million acres of privately owned forest.
  - Related to facts is the simple finding that many people do *not* know much about forests in the Northeastern Area and forest stewardship in general. For instance, few people were absolutely sure that the Northeast is the most forested part of the nation. However, there was no correlation to knowing this fact (as well as others) and holding positive attitudes toward forest stewardship. For this reason, factual knowledge is not a very important message in this regard.
  
- **There are very specific findings regarding audiences that would be more receptive to forest stewardship. One important target market consists of those who participate in outdoor recreation. It is important to reach outdoor recreationists because they often have a connection to forests and they are more likely to support forest stewardship than are those who do not participate in outdoor recreation.**
  - A large percentage of the populace hikes and views scenery and wildlife. This group also was correlated with holding favorable views of forest stewardship, suggesting that they would be more likely to become involved in or support the Forest Stewardship Project.
  - Another group of outdoor recreationists consists of those who do more active sports than hiking, such as paddling or horseback riding. This group, too, shows a higher likelihood to support forest stewardship, compared to those who do not participate in these activities.

- **In looking at those groups most receptive to the idea of forest stewardship, residents of rural areas or small cities/towns are more likely to rate the importance of stewardship of privately owned forests high, compared to urban and suburban residents.**
  - Perhaps it was intuitive that predominantly rural people will place more importance on forest stewardship. This finding verifies that intuition.
  
- **Another group that would be receptive to receiving information is *new* landowners. In the focus groups, these people appeared to lack the experience of managing their own land and appeared to be open to advice.**
  - In general, the focus groups found that new landowners would accept advice. Meanwhile, more established landowners more often tended to think that they did not need advice.
  
- **Several groups appear to need more effort devoted to them vis-à-vis outreach and education than is currently being devoted to them. In particular, the data suggest that land developers, the business community, group landowners, college educators, and legislators were all groups to which more effort should be devoted. A secondary list includes college students, landowners associations, and residents within 25 miles of a designated forest.**
  - The analysis included a comparison of two series of questions asked of State Foresters. The first question presented them with a list of groups of people and asked them to rate how much of a priority each group is in current outreach efforts and then how much of a priority each group should be in outreach efforts. The analysis that looks at the results together can suggest where current efforts meet the perceptions of where the priorities should be and where the perception of priority is much greater than the current priority. In this analysis, the priority given to those five groups is not commensurate with the priority that State Foresters think should be given.
  - A couple other groups also do not have the priority given to them that State Foresters desire, but not to the extent of those five aforementioned groups. These other groups that are somewhat out of line with desired priorities include college students, landowners associations, and residents within 25 miles of a designated forest.
  
- **Another important aspect of communications is the entity that delivers the message. Take advantage of the high credibility of government agencies (while simultaneously taking care to *not* brand the Project as a government *mandate* or government *intrusion*). Government sources (despite some anti-government feeling that exists in this country) are widely used—the most used source for forest-related information in the survey of residents—and they are, for the most part, considered credible.**
  - In an open-ended question regarding where residents obtained information about forests and forest-related issues, the top source was government agencies, with 36% of people saying that they use them.
  - The survey asked about the credibility of eight entities that provide forest-related information. The top-ranked ones were the U.S. Forest Service, a forester with the U.S. Forest Service, and then the State agency most responsible for forest management. These were all more credible than a forest products company, the television news media, or a city/town newspaper.

- **Regarding using the government as a vehicle to disseminate information, note that *local* government is received better by people than is the state government or the federal government. Therefore, emphasis should be placed that the government involvement is local. (Even if a state agency employee is the contact for the Project, the emphasis should be that this person knows *local* conditions and works *locally*.)**
  - Although the quantitative survey showed fairly positive results regarding credibility of government sources of information, the focus groups were rife with anti-government feelings or at least ambivalent feelings about the government, particularly government entities that appear to be disconnected from local issues. One focus group participant rated the government source less credible the farther it got away from local government, saving the worst ratings for the federal government.
  
- **While government sources are useful because many people already use them for information, and those sources should be used to help disseminate information, it is important to break any perception that participation in the Forest Stewardship Project results in the government swooping down to take control of the land or that participation involves burdensome *mandates*.**
  - While the focus group participants, for the most part, received the forest stewardship message positively, there were some who questioned whether it resulted in loss of control of the land or whether it involved lots of mandates. People reacted quite negatively to the thought that they would no longer have decision power over their own land. They seemed to be appeased in learning that the Project is voluntary, but their leap to assume that the Project involved heavy handed mandates suggests that this assumption will need to be countered. In other words, people assume the worst regarding mandates unless informed otherwise.
  
- **Another bit of misinformation that may need to be countered is that the Forest Stewardship Project is anti-logging.**
  - In the focus groups, many people jumped to the conclusion that the Project is nothing but a preservation effort that is anti-logging. While some environmental extremists may be completely anti-logging, most of the people in the focus groups (this aspect was not tested in the survey) were sympathetic with forest-related industry and wanted the forests to be used. It is important that the Project not be erroneously branded as an anti-logging program. (Although as a reason for forest stewardship, remember that ecological reasons resonated better than did economic reasons.)
  
- **While a very low percentage rate the NAASF as not at all credible as a source of information, there is still some room for improving the NAASF's credibility, which involves an effort to make more people aware of the NAASF and to make more people consider it credible.**
  - The credibility of the NAASF is lower than that of the U.S. Forest Service and the state agency most responsible for forest issues. Some of the low percentage rating the organization credible is caused by the relatively substantial percentage answering "don't know" regarding the NAASF, leaving fewer people to give a positive rating (of all the entities tested, the highest percentage not knowing what credibility rating to give was for

the NAASF—fully 35% did not rate its credibility). It is important to move these 35% of people into the realm of thinking that the NAASF is credible.

- Another aspect of credibility pertains to those who think the organization is credible, but only *somewhat* credible rather than *very* credible. In total, 27% of Northeastern Area residents in the survey give a rating of only *somewhat* credible or *not at all* credible (this last group, fortunately, small), meaning that they have some credibility concerns.
- **A finding related to credibility is that the State Foresters do *not* rate the quality of information that their agency provides particularly high. The reasons for this should be further explored, and remedial actions should be taken to improve the outreach materials.**
- In rating the quality of information that their agency provides on a scale from “0” to “10,” with “10” being the highest quality, *none* of the State Foresters rated the information that their agency provides as a “9” or a “10.” These are certainly anemic ratings that should be improved.
- **While television is an expensive medium to use for messaging, it is an important source of information about forests for about a fourth of Northeast Area residents. Additionally, print media is also still important for about the same amount of people. Therefore, although the Internet may be the most cost-effective way to disseminate information, these more expensive formats should be considered. Note that older people and more educated people (who are otherwise more disposed to support forest stewardship) are the most likely to use print media.**
- In the survey, 24% of respondents indicated using television for information, while 23% use newspapers and 21% use magazines. Because of this fairly robust use, explore using these media, when it is cost-effective to do so.
- **Email newsletters may be underutilized as a outreach tool.**
- In the survey of State Foresters, a large majority (79%) say that email newsletters should be used frequently, but only 29% say that they are currently used frequently.

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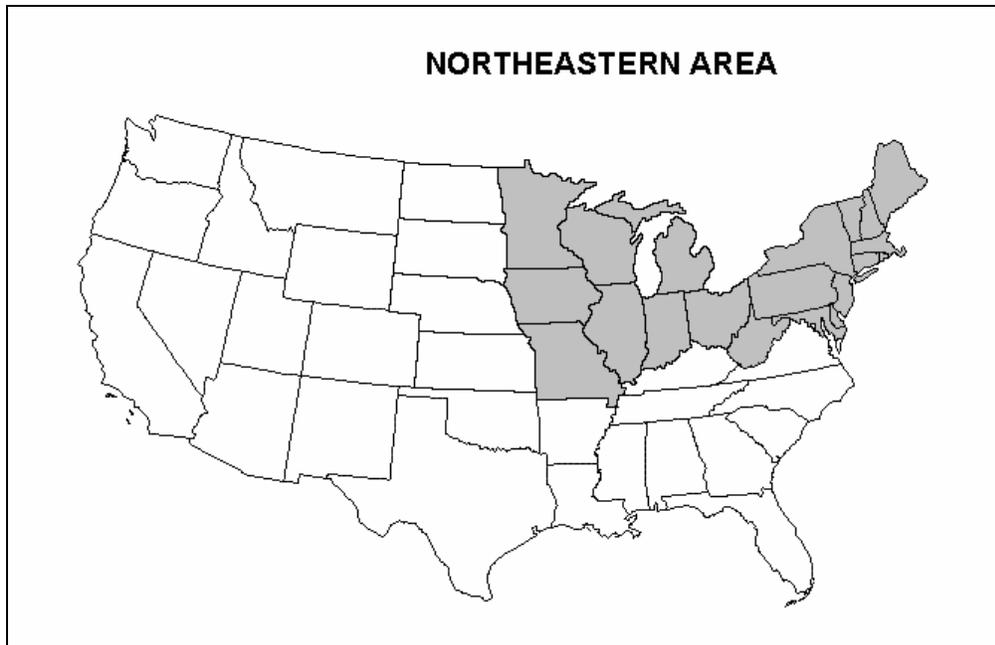
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## CHAPTER 1. BACKGROUND

This study was conducted for the Northeastern Area Association of State Foresters (NAASF) to develop effective communications, outreach, and marketing strategies for the NAASF's Forest Stewardship Project. Research for the study was conducted with residents in the U.S. Forest Service's Northeastern Area states, which are Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin (Figure 1.1).



**Figure 1.1. Map of Northeastern Area**

### GENERAL BACKGROUND

Authorized by the Cooperative Forestry Assistance Act of 1978, the Forest Stewardship Project provides technical assistance through state agency partners to landowners of about 31 million acres of non-industrial private forest land. Such private lands make important contributions to the nation's clean water and air, wildlife habitat, recreational resources, and timber supplies. The Forest Stewardship Project provides private landowners with information for managing their forests for a variety of goals. Management plans developed under the program help landowners become more proactive in the maintenance of their forests, thereby increasing the chances that the forests will remain intact, productive, and healthy, and that future generations will have the social, economic, and ecological benefits that these lands provide. Participation in the Forest Stewardship Project is open to any non-industrial private forest landowner committed to the active management and stewardship of a forested property for at least 10 years.

While outreach among landowners and foresters in Northeastern Area states regarding the Forest Stewardship Project has proven effective, the ultimate success of the initiative depends on reaching a broader audience and the public as a whole. This study was conducted to expand the

Project's reach beyond landowners and foresters by providing research-based communication and outreach tools necessary to encourage broad-based, sustained public investment in and support of ethical forest stewardship practices and behaviors. To this end, the project employed qualitative and quantitative research regarding target markets and effective communications strategies, thereby providing guidance on the most receptive audiences and most effective messaging techniques. The data collected are intended to provide insight regarding the identification of target audiences, key messaging strategies that resonate with target audiences, and the provision of adaptable strategies and tools to be used in communications.

## RESEARCH COMPONENTS

Three primary research components made up this study. The first was four focus groups conducted with Northeastern Area residents in Ohio, New York, New Hampshire, and Wisconsin. The second component entailed a Web-based survey of State Foresters and Cooperative Forest Management Committee Members. A telephone survey of Northeastern Area residents made up the third component of the study. The methodologies for the focus groups and surveys are discussed in detail in Chapter 8.

## NOTES ON READING THE REPORT

Ideas and concepts from the focus groups, including verbatim quotations from group participants, are integrated into the report.

Data from the survey of State Foresters and Cooperative Forest Management Committee Members are presented separately from the telephone survey data of Northeastern Area state residents. Any graphs from the survey of State Foresters or the survey of Committee Members are labeled as such; other graphs not specifically labeled as "State Foresters" or "Committee Members" are of the general population.

In examining the survey results, it is important to be aware that the questionnaires included several types of questions:

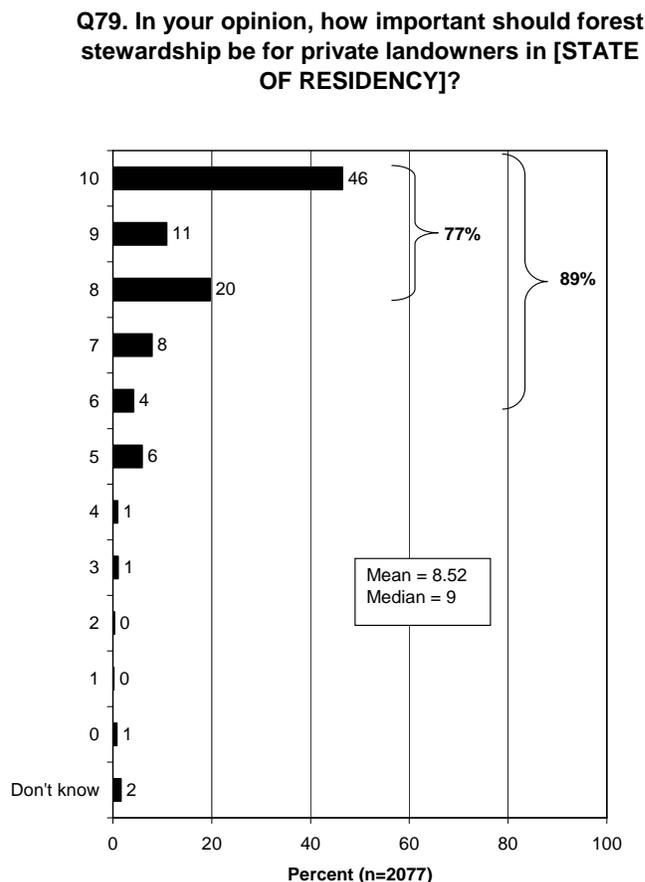
- Open-ended questions are those in which no answer set is given to the respondents; rather, they can respond with anything that comes to mind from the question.
- Closed-ended questions have an answer set from which to choose.
- Some questions allow only a single response, while other questions allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."
- Many closed-ended questions (but not all) are in a scale, such as "more important," "just as important," or "less important." Another typical scale in this survey was a "0" to "10" rating scale.
- Many questions are part of a series, and the results are primarily intended to be examined relative to the other questions in that series (although results of the questions individually can also be valuable). Typically, results of questions in a series are shown on a single graph.

Some graphs show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because outliers (extremely high or low numbers relative to most of the other responses) may skew the mean, the median may be shown. The median is the number at which half the sample is above and the other half is below. In other words, a median of 150 means that half the sample gave an answer of more than 150 and the other half gave an answer of less than 150.

Most graphs show results rounded to the nearest integer; however, all data are stored in decimal format, and all calculations are performed on unrounded numbers. For this reason, some results may not sum to exactly 100% because of this rounding on the graphs. Additionally, rounding may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when ratings of “8,” “9,” and “10” are combined to determine the total percentage who give a high rating).

## CHAPTER 2. PRIORITIES AND OPINIONS ON FOREST-RELATED ISSUES

The survey directly asked about the perceived importance of *forest stewardship* for private landowners. More than three-fourths of respondents (77%) give a high rating (“8,” “9,” or “10”) to its importance, and an overwhelming majority of 89% give a rating of higher than the midpoint (Figure 2.1). This finding suggests that forest stewardship should have a receptive audience among the general population. In short, there is no widespread denial of the importance of forests and forest stewardship, as evidenced by the quite small percentages in the low end of the ratings.



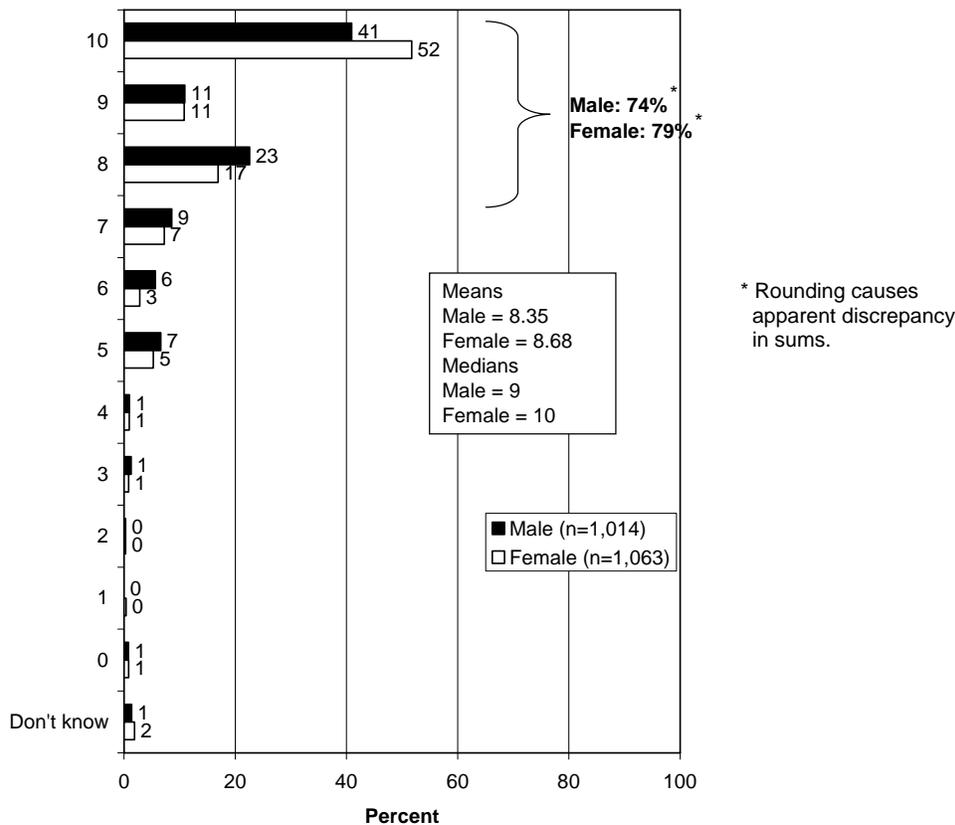
**Figure 2.1. Ratings of the Importance of Stewardship of Privately Owned Forests**

The focus group findings also found strong feelings regarding the importance of forest stewardship. As a New Hampshire focus group participant said, “I would tell people it’s for the future—for themselves, for their children, for ecology, for education. Everything.”

The above survey question was crosstabulated by various demographic variables. Women are more likely than men to give a high rating to the importance that stewardship of privately owned

forests should be. As shown in Figure 2.2, women have a higher mean than do the men, and they have a slightly higher percentage giving a rating of “8” or higher (79% of women, compared to 74% of men) ( $p \leq 0.001$ ). The difference is quite marked in the percentage of each group giving the highest rating of “10”: 52% of women do so, compared to 41% of men ( $p \leq 0.001$ ).

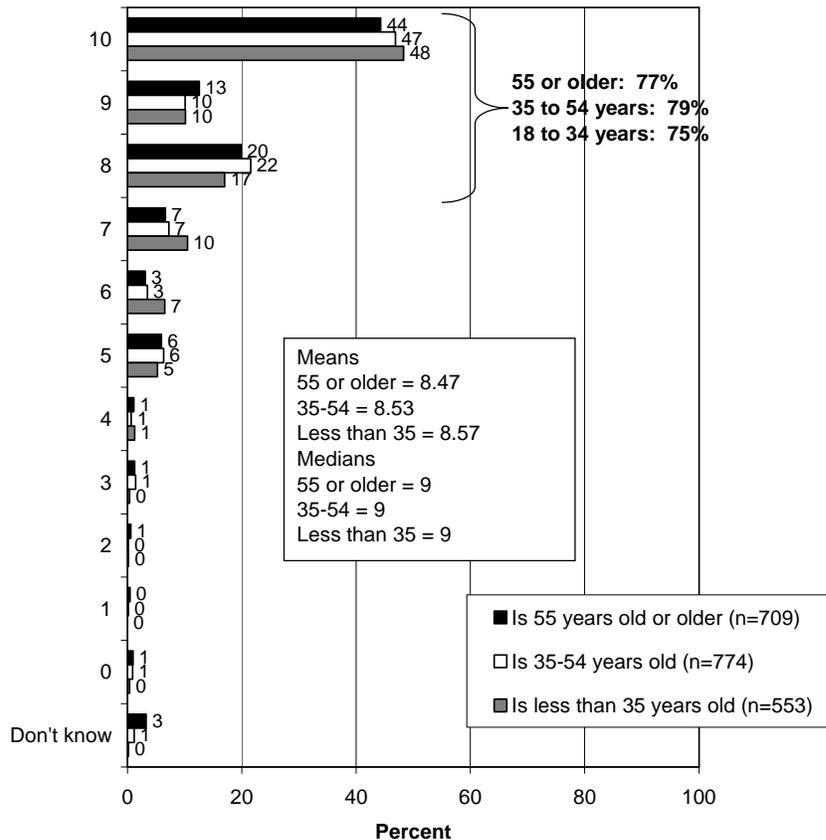
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.2. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Gender**

Age does *not* have a marked effect on the opinions on Q79 regarding the importance that stewardship of privately owned forests should be. Figure 2.3 shows that there is little difference among age groups, with very close mean ratings and all with from 75% to 79% giving a high rating (of “8” or higher), and the differences are *not* statistically significant.

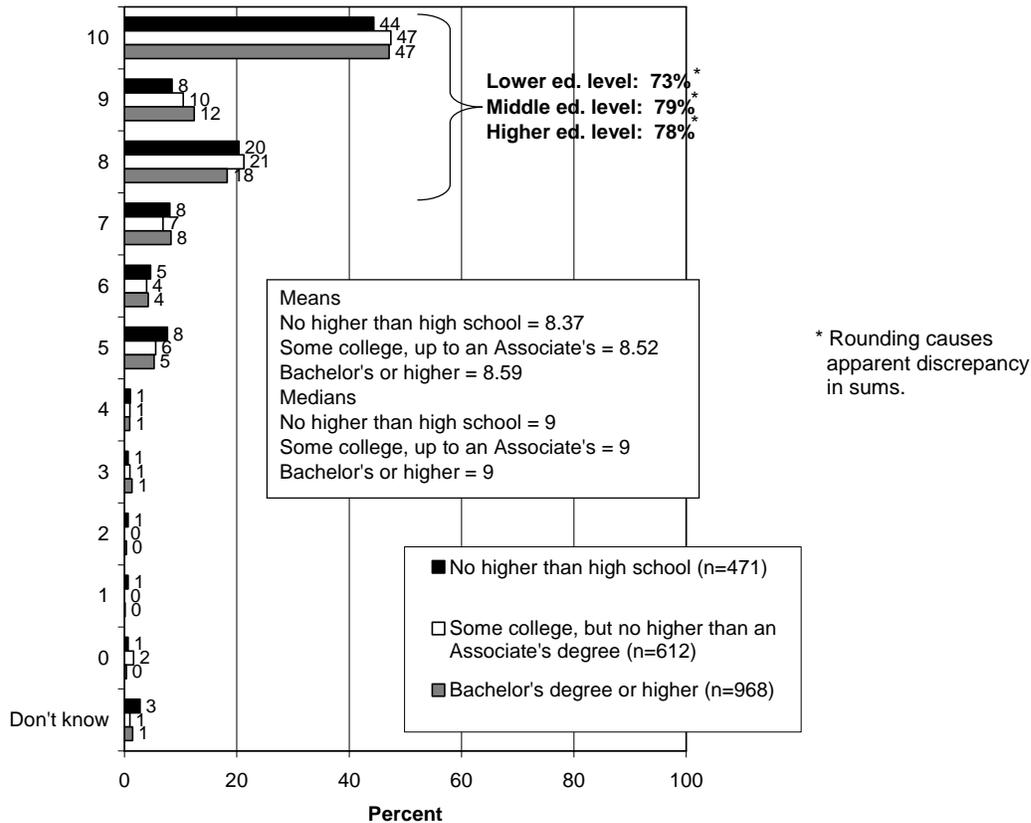
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.3. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Age**

Education level has just a slight effect on opinion regarding the importance that stewardship of privately owned forests should be. Those in the lower educational level (no higher than a high school diploma) give a slightly lower mean rating compared to the other educational groups in this crosstabulation (Figure 2.4). Furthermore, a slightly lower percentage of this group give a high rating: 73% of the lower educational group give a high rating (of “8” or higher), compared to 79% and 78% of the other educational groups. Note that the differences are very slight, although the overall differences on the question are statistically significant ( $p \leq 0.05$ ).

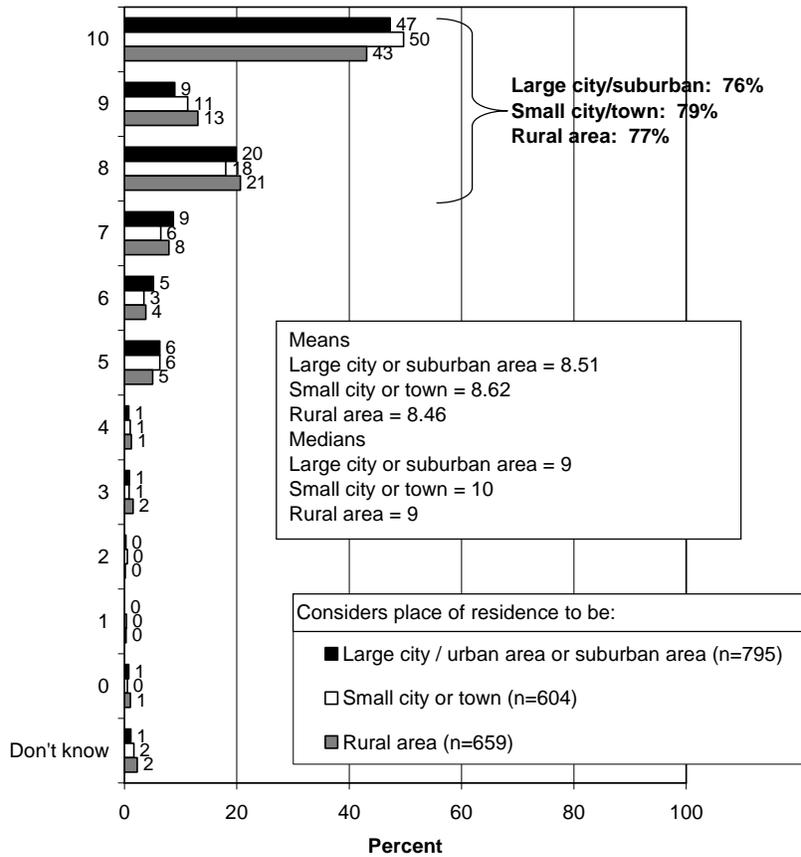
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.4. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Education**

The crosstabulation by type of residential area (large city/urban area/suburban area, small city/town, and rural area) found no marked differences in opinions on the importance that stewardship of privately owned forests should be. The mean ratings are quite close, as are the percentages giving a high rating (Figure 2.5).

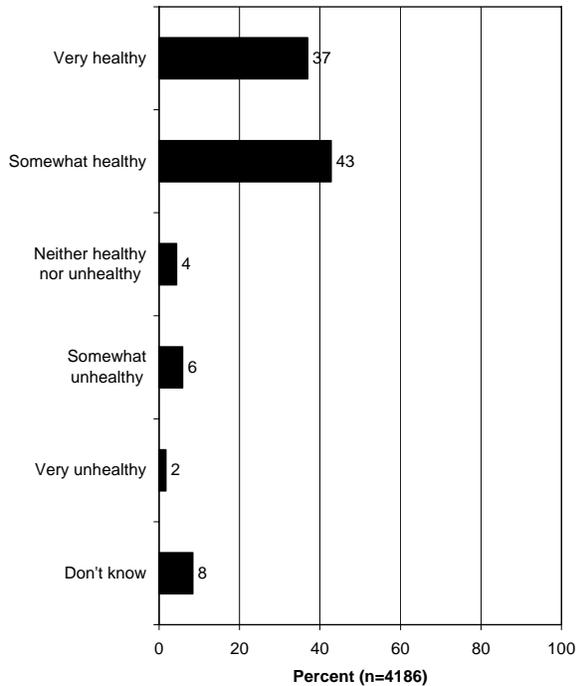
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.5. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Type of Residential Area in Which Respondent Lives**

Perhaps a good follow-up point in assessing the priorities of the general public is to also examine whether the general population thinks that the forests in their state of residence are healthy or unhealthy. A quite large majority of the general population in the Northeastern Area (80%) would describe forests in their state, in general, as healthy, about evenly divided between *very* healthy and *somewhat* healthy (Figure 2.6). On the other end, only 8% would describe them as unhealthy (the rest are neutral).

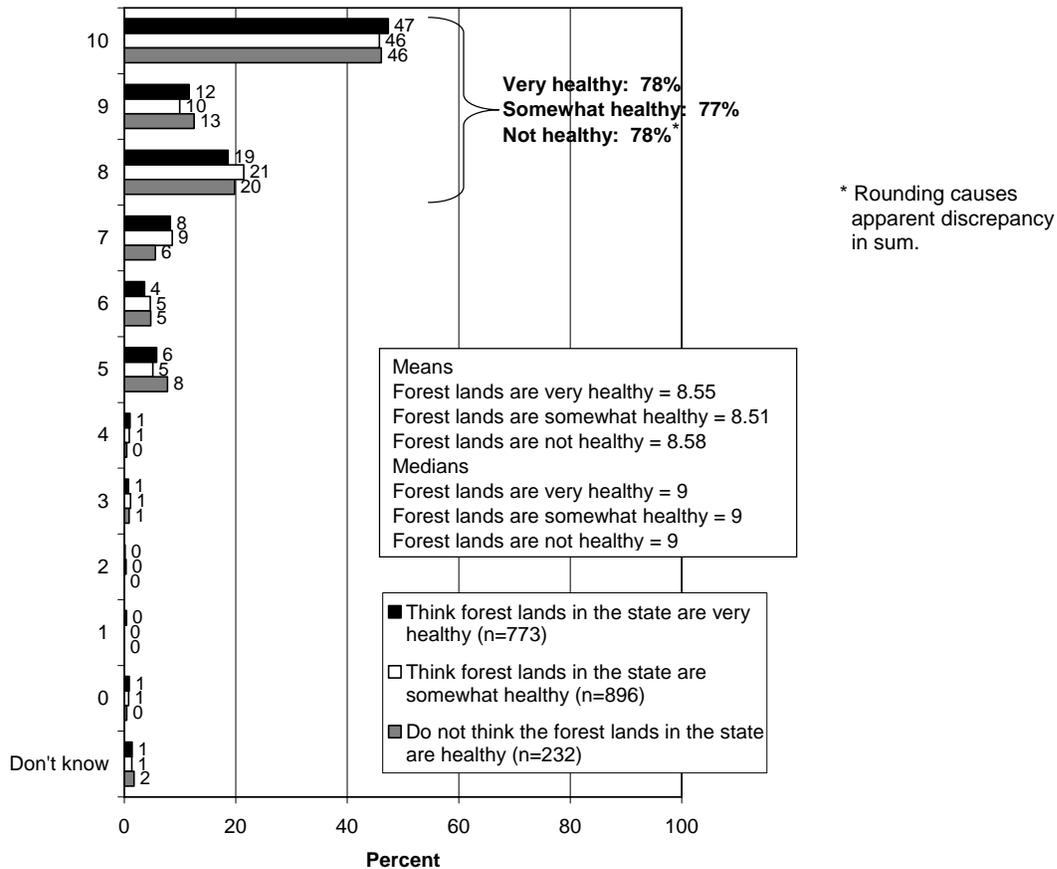
**Q19. In general, would you describe forest lands in [STATE OF RESIDENCY] as healthy or unhealthy?**



**Figure 2.6. Opinions on the Health of Forest Lands in Respondent’s State of Residence**

The study explored whether these perceptions of forest health influence the priority people place on forest-related issues. Certainly, one could conjecture that the 37% of respondents giving a rating of *very* healthy would give a different priority to addressing forest-related issues than would a person giving a rating of unhealthy. However, the crosstabulation found almost no difference in the groups: the mean ratings are just hundredths of point away from each other, as are the percentages giving a high rating (Figure 2.7).

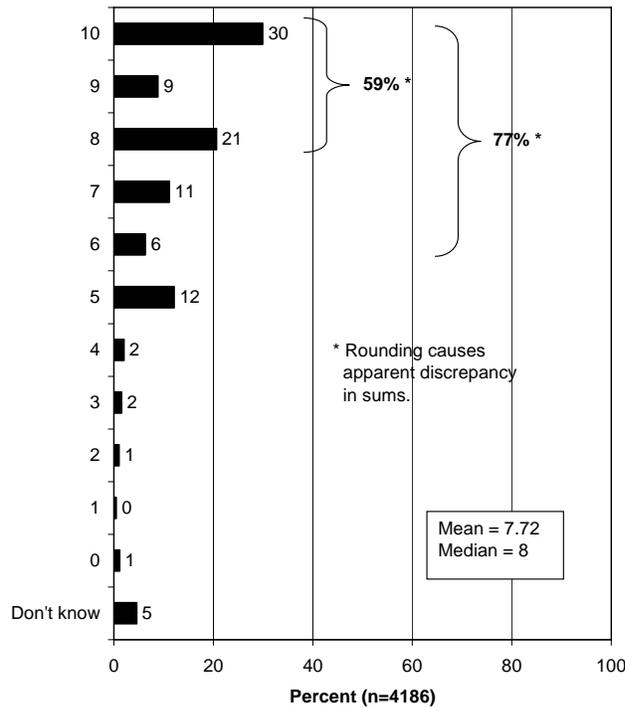
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.7. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Perceptions of Overall Forest Health in State of Residence**

Another finding that has implications for priorities is that a large majority of Northeastern Area residents (59%) give a high rating (“8,” “9,” or “10”) to the *importance* of privately owned forest to the *overall health and quality* of forests in their state of residence (Figure 2.8). Furthermore, a large majority (77%) give a rating of importance of higher than the midpoint of the scale (“5”), while only 6% give a rating of importance of lower than the midpoint of the scale.

**Q38. In your opinion, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important, how important are privately owned forests to the overall health and quality of all forests in [STATE OF RESIDENCY]?**

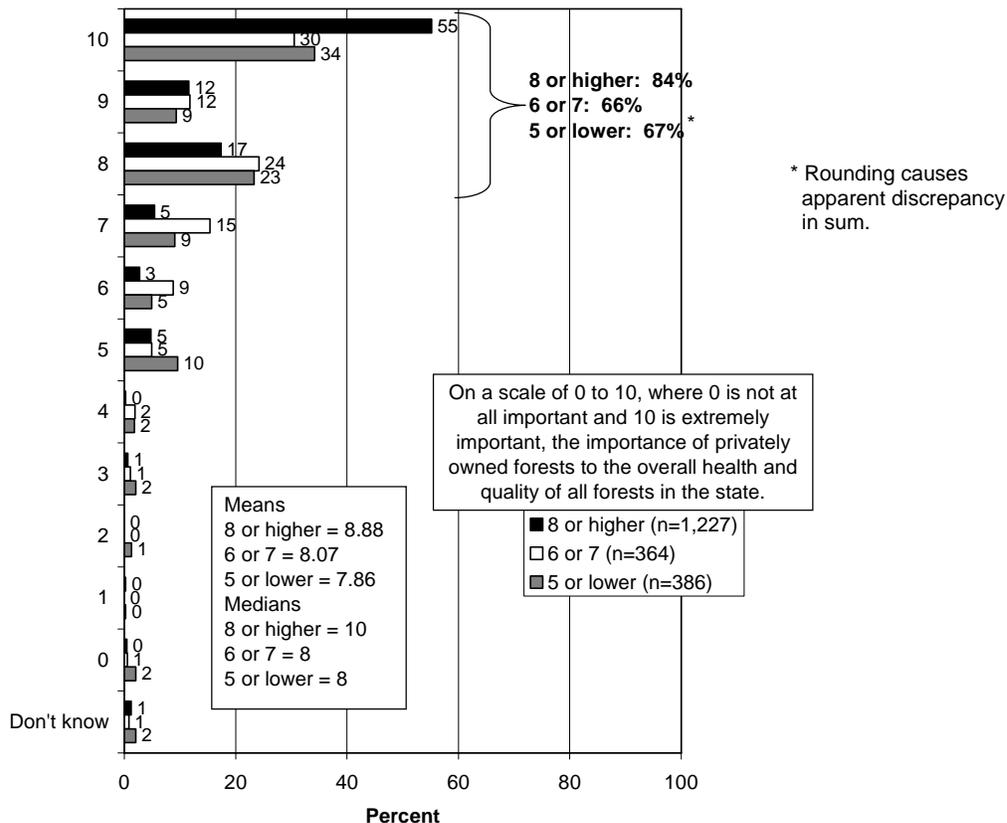


**Figure 2.8. Ratings of the Importance of Privately Owned Forests to the Overall Health and Quality of Forests in the Respondent’s State of Residence**

The focus group findings reiterate the importance placed on privately owned forests for the overall health and quality of forests. Focus group participants, for the most part, appreciate and support efforts to maintain the health of the forest ecosystem in their state. Focus group participants also discussed the importance of ensuring that wildlife habitat is not lost, such as this comment from a New Hampshire participant: “Private forests link public forests. Animals need corridors and pathways to move around.”

In a perhaps obvious finding, those who give a high rating to Q38 regarding the importance of privately owned forests to the overall health and quality of forests in their state are more likely to give a high rating to the importance that stewardship of privately owned forests should be (Figure 2.9). In particular, note the difference in the percentages giving a high rating (of “8” or higher) ( $p \leq 0.001$ ).

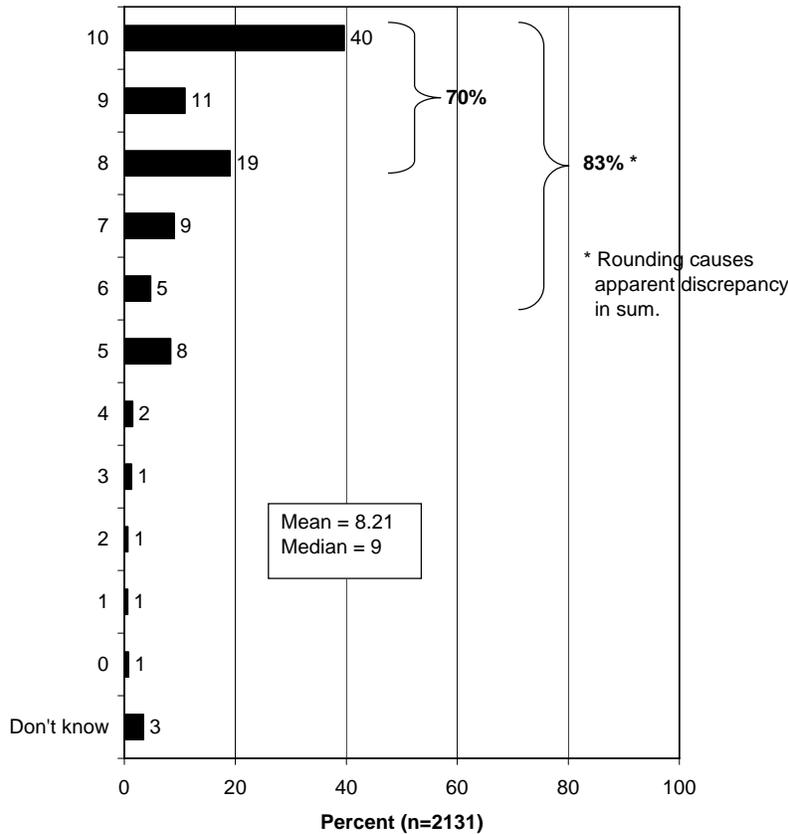
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.9. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Ratings of Importance of Privately Owned Forests to Overall Forest Health**

Similar to Q38 previously discussed (see Figure 2.8), a large majority of respondents (70%) give a high rating (“8,” “9,” or “10”) to the *importance* of privately owned forest to the *overall ecosystem* of their state of residence (Figure 2.10). Furthermore, a very large majority (83%) give a rating of importance of higher than the midpoint of the scale (“5”), while only 5% give a rating of importance of lower than the midpoint of the scale. Together, the findings of Q38 and Q42 show that, despite a general perception that forests currently are healthy and which might lead to complacency, it appears that the general population, nevertheless, places much importance on privately owned forests in their state. The data suggest that appeals regarding the importance of privately owned forests would resonate with many people.

**Q42. How important are privately owned forests to the overall ecosystem of [STATE OF RESIDENCY]?**

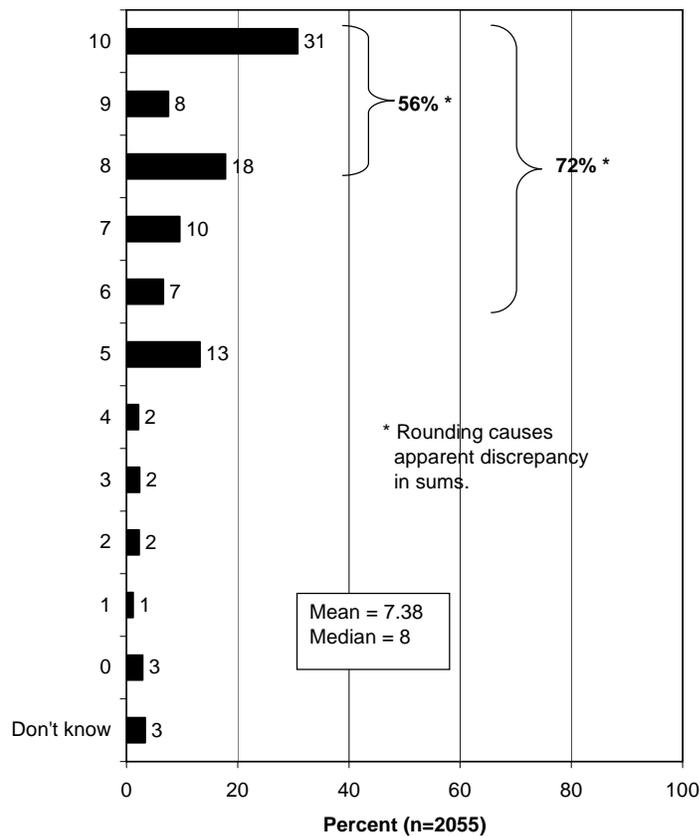


**Figure 2.10. Ratings of the Importance of Privately Owned Forests to the Overall Ecosystem in the Respondent’s State of Residence**

A similar question asked respondents to rate the importance of privately owned forests to their *own personal health and quality of life*. On this question, a majority of respondents (56%) give a high rating (“8,” “9,” or “10”), and 72% give a rating of higher than the midpoint (Figure 2.11). This finding reinforces the possibility that appeals regarding the importance of privately owned forests would resonate with many people. It is worth noting, however, that the importance of privately owned forests to the *overall ecosystem of the respondent’s state of residence* is rated higher than the importance of privately owned forests to the *respondent’s personal health and quality of life* (in this case, an ecological value is rated higher than a personal benefit). In short, the connection between privately owned forests and personal quality of life is not as strong in people’s minds as is the connection between privately owned forests and the health of the state’s forests overall. As stated by a focus group participant in the Ohio group, “Unless you know the person who owns the [private land], it’s not going to benefit you.” A New York focus group

participant had similar feelings: “Unless I live next to a private forest, it’s not going to benefit me personally.”

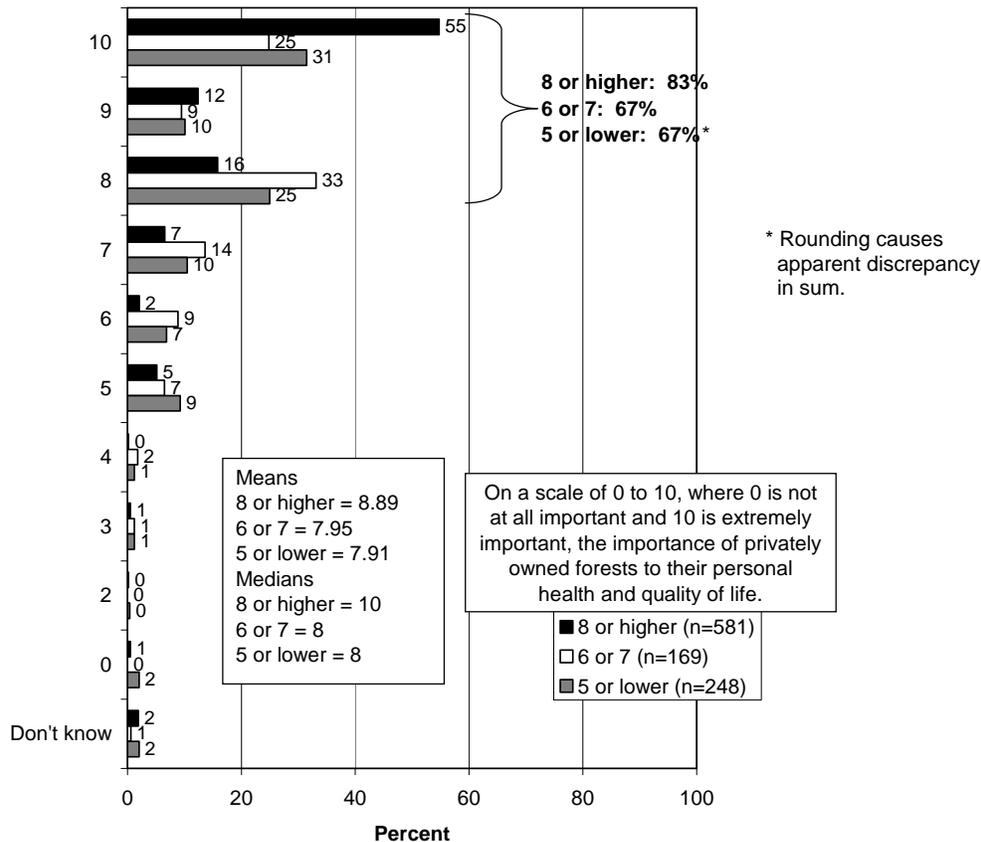
**Q45. How important are privately owned forests to your personal health and quality of life?**



**Figure 2.11. Ratings of the Importance of Privately Owned Forests to the Respondent’s Personal Health and Quality of Life**

A crosstabulation was run of Q45, regarding the importance of privately owned forests to the respondent’s personal health and quality of life, and Q79, which asked about the importance that stewardship of privately owned forests should be. The findings of this crosstabulation are not surprising: there is a correlation between giving a high rating to one and giving a high rating to the other (Figure 2.12) ( $p \leq 0.001$ ). In particular, the percentages giving a rating of “10” markedly demonstrate this connection ( $p \leq 0.001$ ).

**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



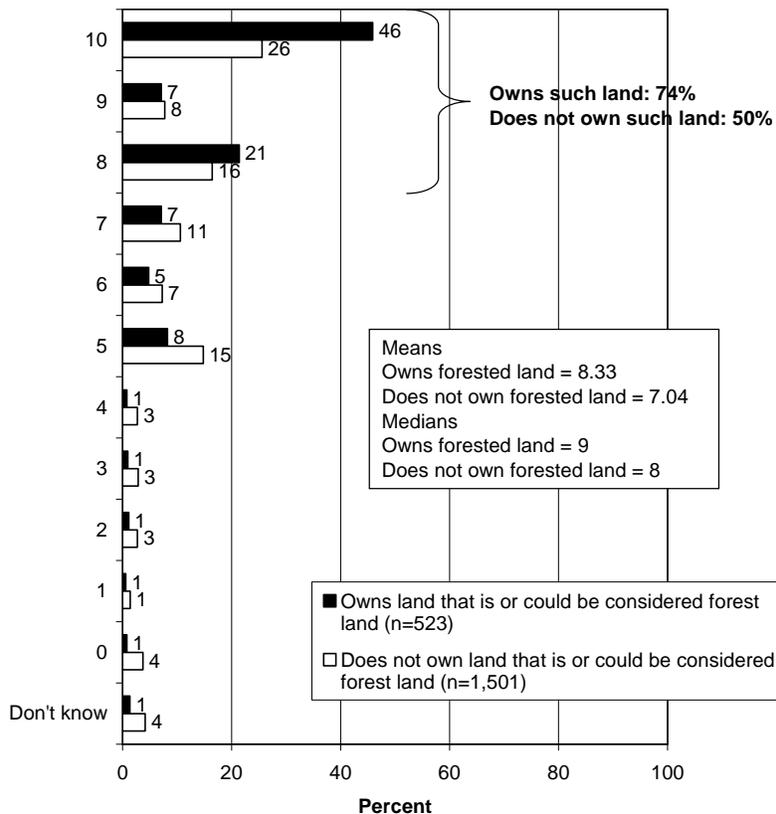
**Figure 2.12. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Ratings of Importance of Privately Owned Forests to Respondent’s Personal Health and Quality of Life**

One of the findings of the focus groups, as previously discussed, is that many people who do not own forest land do not perceive that privately owned forests provide them with any benefits. They feel that benefits accrue to the owners of the forests but not to others, even those who may live near the privately owned forests. To examine this perception, the above question was crosstabulated by Q236 that asked respondents if they owned any land that could be considered forest land (in that question, 25% of respondents indicated owning land that could be considered forest land).

In this crosstabulation, those who do not own land that is or could be considered forest land give a lower rating to the importance of privately owned forests to their personal health and quality of

life (Figure 2.13). In the crosstabulation, 46% of landowners who own forest or potential forest land give an importance rating of “10,” compared to 26% of those who do not own such land, and 74% of forest/potential forest landowners give a rating of “8” or higher, compared to 50% of those who do not own such land ( $p \leq 0.001$ ).

**Q45. How important are privately owned forests to your personal health and quality of life? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**

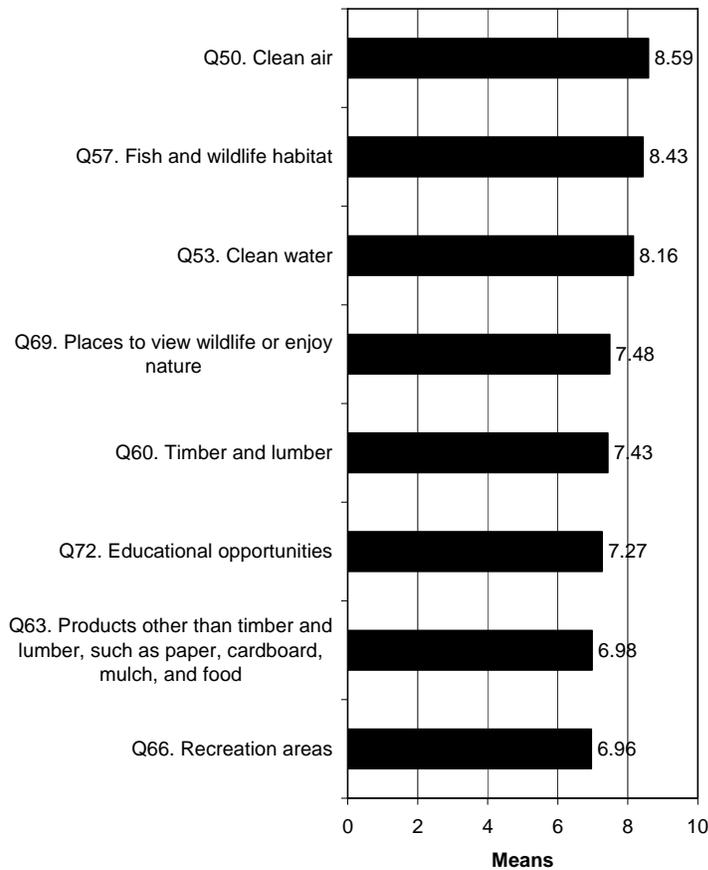


**Figure 2.13. Ratings of the Importance of Privately Owned Forests to the Respondent’s Personal Health and Quality of Life Crosstabulated by Forest Land Ownership**

The survey also explored how priorities relate to one another. In one series of questions, the survey asked respondents to rate the importance of privately owned forests for providing eight things. Ecological values receive higher ratings than do values pertaining to human benefits (Figure 2.14). In looking at mean ratings, the three top items in importance that privately owned forests provide are clean air (mean importance rating of 8.59), fish and wildlife habitat (8.43), and clean water (8.16). These items are rated markedly higher than the other items, which tend to be human benefits, such as places to view wildlife or enjoy nature (7.48), timber and lumber (7.43), educational opportunities (7.27), other wood products (6.98), and recreation areas (6.96).

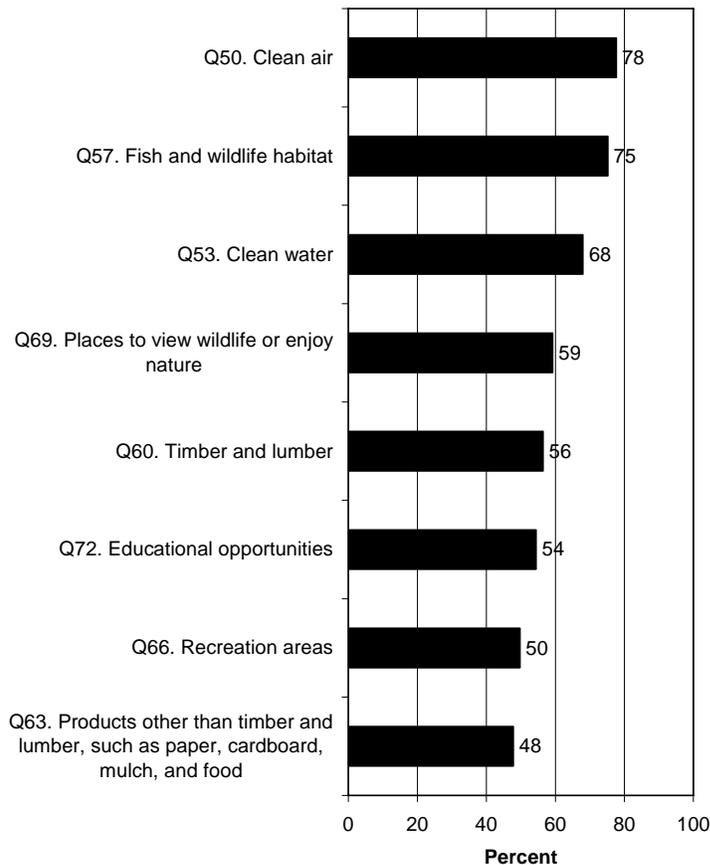
This finding is reiterated by looking at the graph of the percent who give high ratings to the items (a rating of “8,” “9,” or “10”), which also shows that ecological values rate high—more than two-thirds give a high rating to the importance of privately owned forests for providing clean air, fish and wildlife habitat, and clean water (Figure 2.15).

**On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, the mean rating of importance that privately owned forests are for providing the following.**



**Figure 2.14. Mean Ratings of the Importance of Privately Owned Forests in Providing Various Things**

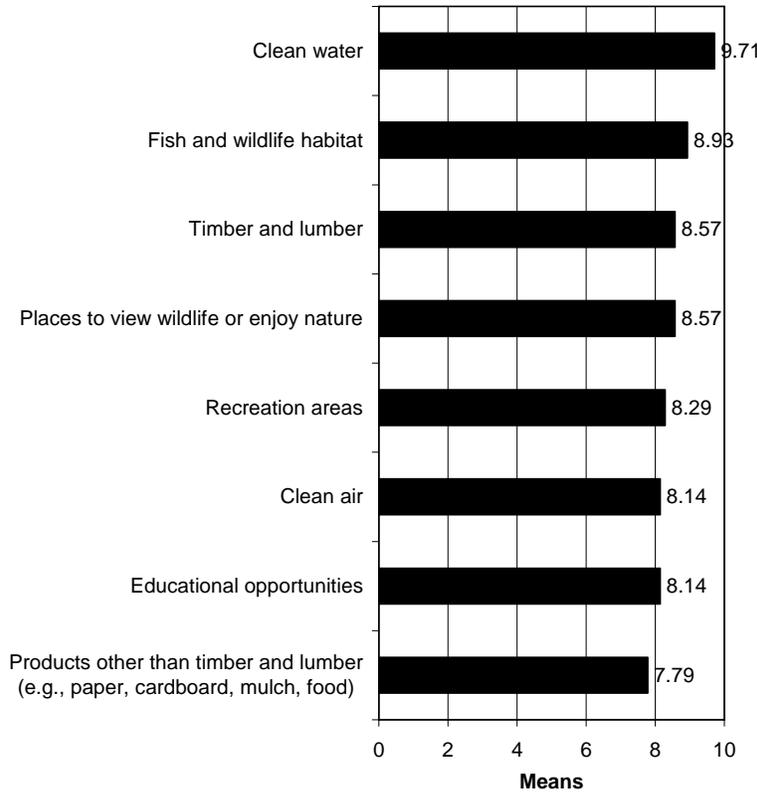
**On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, those who rated the importance that privately owned forests are for providing the following as an 8, 9, or 10.**



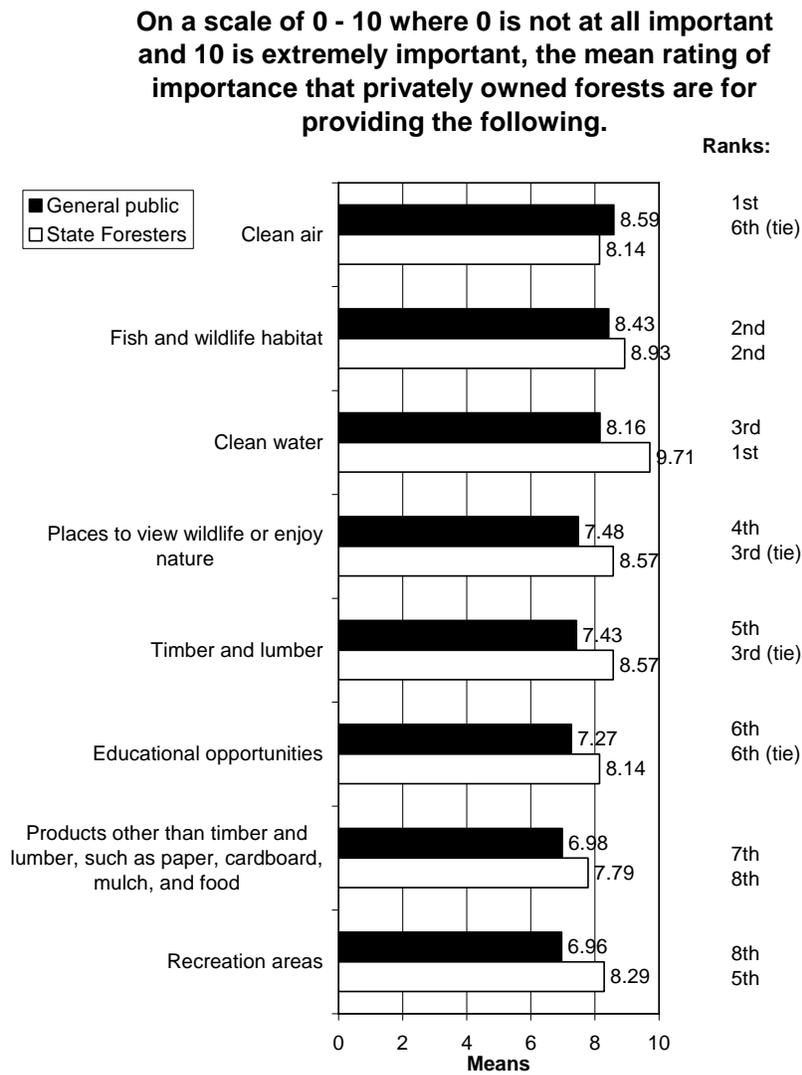
**Figure 2.15. Percent Giving High Ratings to the Importance of Privately Owned Forests in Providing Various Things**

State Foresters were asked a similar series of questions regarding the importance that potential benefits of stewardship of privately owned forests *should be* in agency education, outreach, and communications. They, too, rate ecological values the highest: clean water (mean rating of 9.71) and fish and wildlife habitat (8.93) are at the top (Figure 2.16). The most marked difference between State Foresters' ratings and the general public's ratings, in the comparison of the two groups, is that the general public rates clean air relatively higher than do State Foresters—clean air is the top-ranked benefit among the general public; it is much lower down in the ranking among State Foresters (Figure 2.17). The rankings of the items are also shown in Figure 2.17. The Committee Members' survey had results that were similar to the Foresters survey results.

**On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, the mean rating of importance the following potential benefits of private forest stewardship *should be* for their agency / organization to discuss in its education, outreach, and communication materials and programs.  
(State Foresters.)**



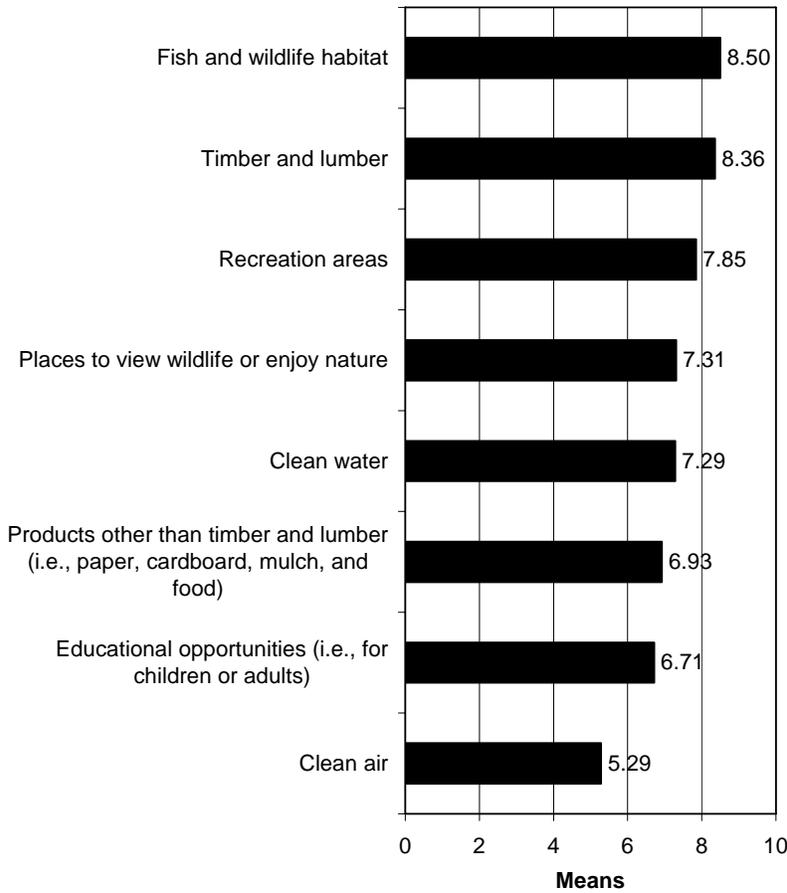
**Figure 2.16. State Foresters’ Ratings of How Important the Benefits Should Be in Agency Education, Outreach, and Communications**



**Figure 2.17. Comparison of State Foresters' Ratings and the General Public's Ratings of the Importance of the Benefits**

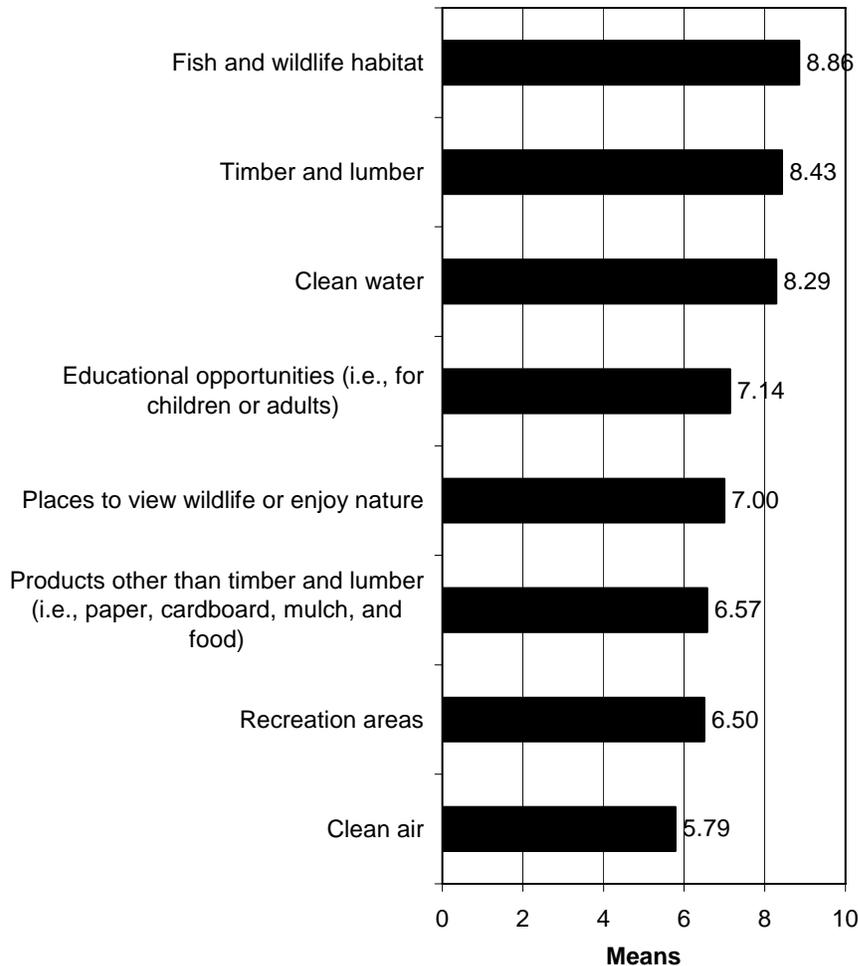
State Foresters were also asked about the same eight potential benefits (referred to as topic areas in the question), but they were asked to give a rating to how much their agency currently addresses each topic (note that the previous series had asked them how important the topic areas *should be*; this asks about actual agency effort). Figure 2.18 shows some disconnect between what the general public regards as important and what agencies currently emphasize. Most importantly, clean water (mean rating of 7.29, which ranks it 5th) and clean air (mean of 5.29, the last-ranked item) are *not* emphasized as much as they probably should be, based on what the general public regards as important. Committee Members also have rankings that do not match the general public's ranking. As shown in Figure 2.19, the Committee Members' ranking has clean air at the bottom, much lower than the general public's ranking, and timber and lumber is higher in the Committee Members' ranking than it is in the general public's ranking.

**On a scale of 0 to 10, where 0 is not addressed at all and 10 is addressed a great deal, the mean rating the following forest stewardship topic areas are currently addressed in their agency / organization's education, outreach, and communication materials and programs. (State Foresters.)**



**Figure 2.18. State Foresters' Ratings of How Much the Benefits Currently Are Addressed in Agency Education, Outreach, and Communications**

**On a scale of 0 to 10, where 0 is not addressed at all and 10 is addressed a great deal, the mean rating the following forest stewardship topic areas are currently addressed in their agency / organization's education, outreach, and communication materials and programs. (Committee Members.)**

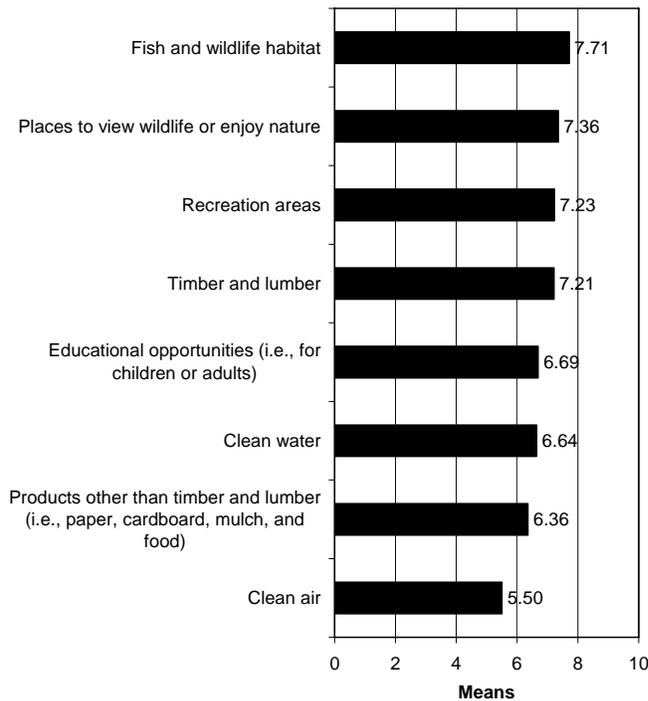


**Figure 2.19. Committee Members' Ratings of How Much the Benefits Currently Are Addressed in Agency/Organization Education, Outreach, and Communications**

Similar to the above discussion of the topic areas currently being addressed by agencies, in which clean water and clean air are relatively low priorities compared to the priorities given them by the general public, Figure 2.20 shows that clean water and clean air are given less emphasis by State Foresters than they should be given, as manifested in the rating of how well the agency addresses the topic. In particular, clean air is the lowest-ranked item by State Foresters in Figure 2.20, whereas the general public ranked it at the top in its priorities (see

Figures 2.14 and 2.15). Committee Members also give a lower priority to clean air than does the general public, but Committee Members rank clean water higher, commensurate with the general public’s ranking (Figure 2.21).

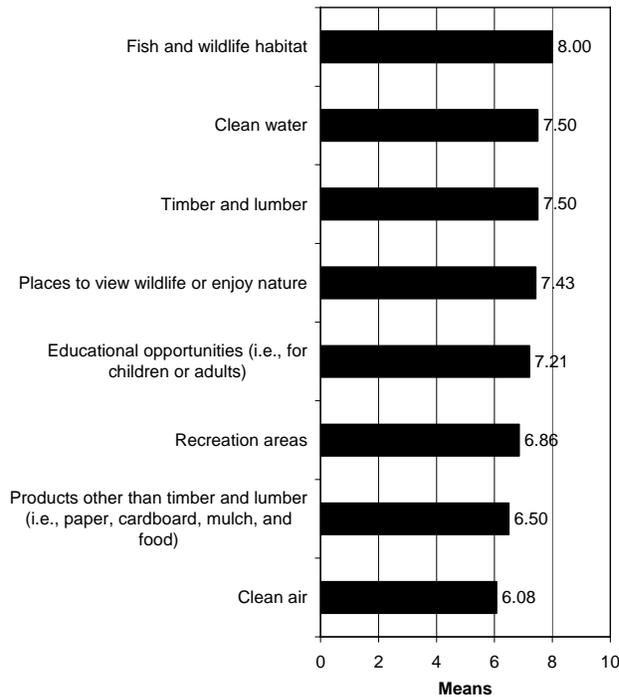
**On a scale of 0 to 10, where 0 is poor and 10 is excellent, the mean rating of performance of their agency / organization on addressing each of the following private forest stewardship topics in education, outreach, and communication materials and programs. (State Foresters.)**



**Figure 2.20. State Foresters’ Ratings of How Well the Agency Addresses the Topics**

On a scale of 0 to 10, where 0 is poor and 10 is excellent, the mean rating of performance of their agency / organization on addressing each of the following private forest stewardship topics in education, outreach, and communication materials and programs.

(Committee Members.)



**Figure 2.21. Committee Members' Ratings of How Well the Agency/Organization Addresses the Topics**

The focus groups demonstrated an important nuance about these priorities: even the low-ranked items in the general population survey have a substantial percentage of respondents giving them high ratings. So while, in general, ecological values ranked higher, there are smaller groups of people who feel very strongly about other values that forests provide, such as recreation and wood products. In response to the discussion about the things that forests provide, the answers varied:

“Cleaning the air is one of the most important things. And me [sic] and my wife and kids go for hikes and go on trails. That’s our life; we love forests. We go somewhere new every time we go out.” —Wisconsin participant

“I’d say the environment benefits from private forests, especially in this area.”  
—New York participant

“I’d say paper, water, and oxygen.” —New Hampshire participant

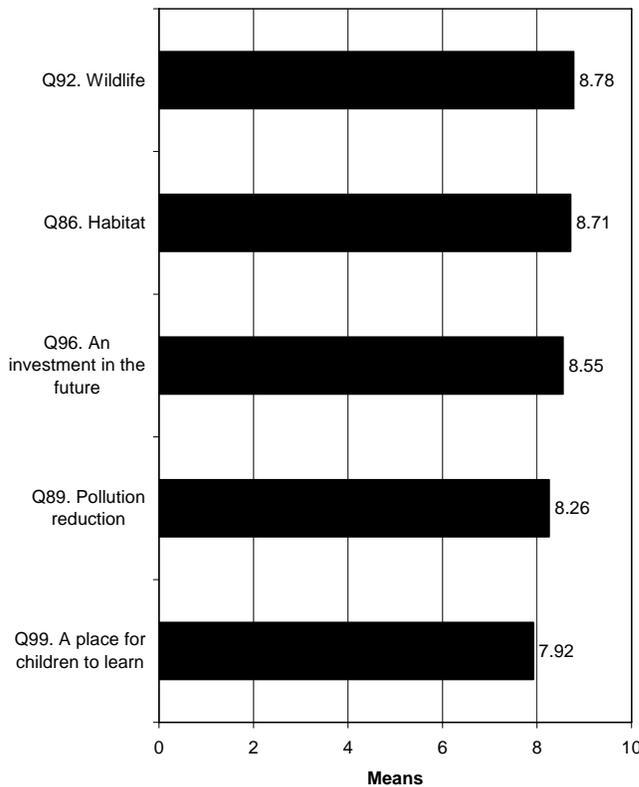
[In response to being asked to name the *most important benefit* of a forest] “The ecosystems, the animals in general.” —Wisconsin participant

“I think it’s about scenery, and also providing a filter system for everything we put in [the environment].” —Wisconsin participant

“I think private forests provide primarily recreational opportunities. There are also commercial benefits like paper mills, which is a way of life for a lot of people.” —New Hampshire participant

A second series of questions asked respondents to rate the importance of privately owned forests for five things: habitat, pollution reduction, wildlife, as an investment in the future, and as a place for children to learn. Again, ecological values come out on top (Figure 2.22). The highest mean ratings are for wildlife (8.78) and habitat (8.71).

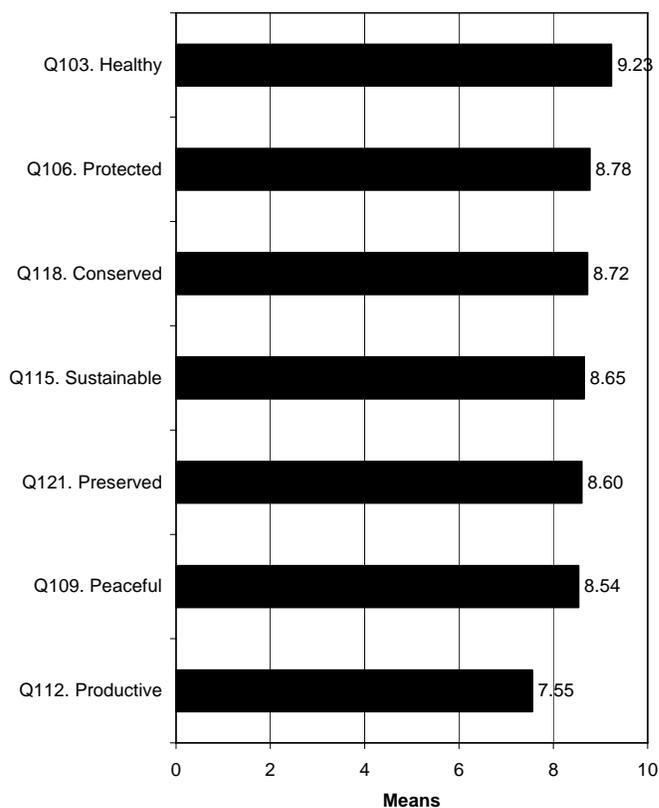
**On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, the mean rating of importance privately owned forests in [STATE OF RESIDENCY] are for the following.**



**Figure 2.22. Mean Ratings to the Importance of Privately Owned Forests for Various Things**

The series above concerned the importance of forests for providing things. Another series asked about the importance that forests *be* certain things, such as the importance that forests be healthy, be protected, or be peaceful. An examination of these questions will help shed light on priorities. At the top in the mean ratings are that it is important for privately owned forests to be healthy (mean rating of 9.23), to be protected (8.78), and to be conserved (8.72) (Figure 2.23). Again, these ecological values rate higher than values related to human benefits, including that forests be sustainable (which implies use) at 8.65 and that forests be productive (7.55).

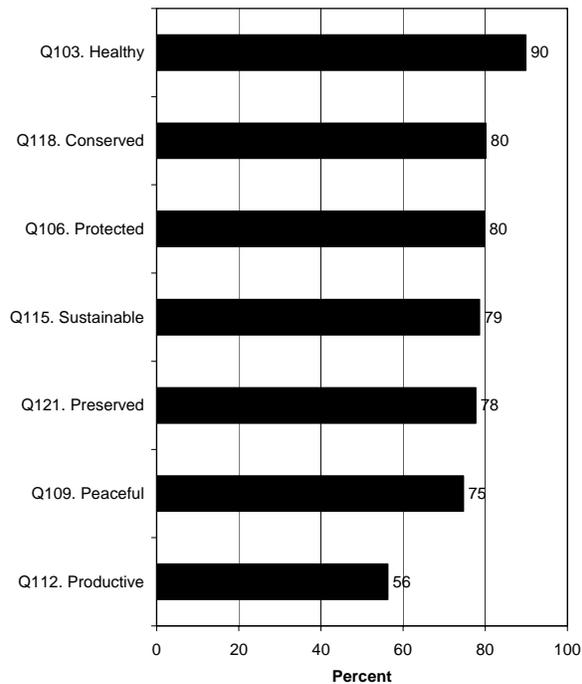
**On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, the mean rating of importance privately owned forests in [STATE OF RESIDENCY] be the following.**



**Figure 2.23. Mean Ratings to the Importance That Privately Owned Forests Be Various Things**

Figure 2.24, which shows the percent who rated each item as an “8,” “9,” or “10” also shows the primacy of *healthy* as a term to which respondents positively react: 90% of respondents give a high rating to the importance that privately owned forests be *healthy*, well more than for any other item. On the other hand, *productive* is markedly lower in ratings than all the other items.

On a scale of 0 - 10 where 0 is not at all important and 10 is extremely important, those who rated the importance privately owned forests in [STATE OF RESIDENCY] be the following as an 8, 9, or 10.



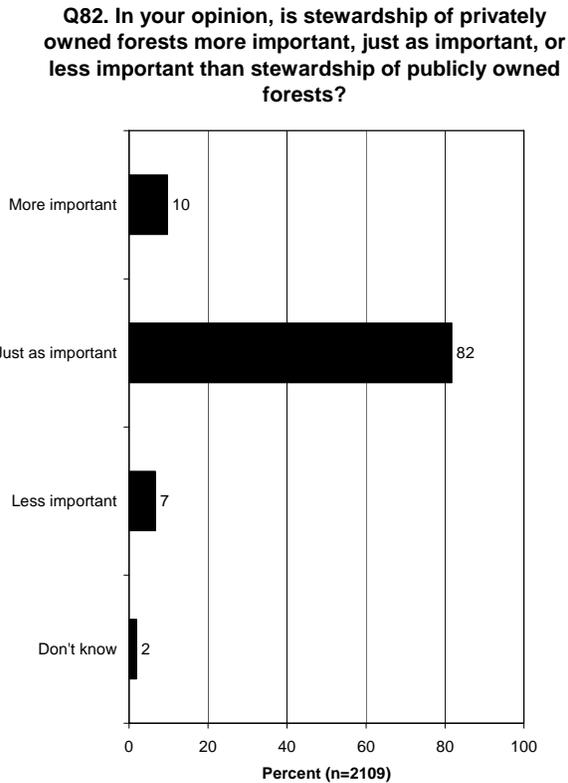
**Figure 2.24. Percent Rating the Importance That Privately Owned Forests Be Various Things as an “8,” “9,” or “10”**

Other findings in the survey, although more pertinent to Chapter 4, have some applicability to this section. The series of questions about messages that resonate, which will be discussed in detail in Chapter 4, also pertains to priorities. In that series of messages, the values that reflect ecological values, as opposed to values that directly relate to benefiting humans, are at the top of the ranking by mean score. In short, the results again point to ecological values taking priority over other values.

Another series of questions about messages that would be most effective at increasing support for stewardship of privately owned forests (again, to be discussed more fully in Chapter 4) has applicability to this section. The findings reiterate that ecological values rate higher than do human values. For instance, near the top is that “private land serves as critical habitat for many of the nation’s endangered species,” which reflects an ecological value. Other top messages in this series relate to water, suggesting that water-related values also have a high priority.

Several individual questions pertained to the priorities of the general population. Figure 2.25 shows that the general population does *not* attach more importance to public forests over private forests or vice-versa: the large majority of respondents indicate that stewardship of privately

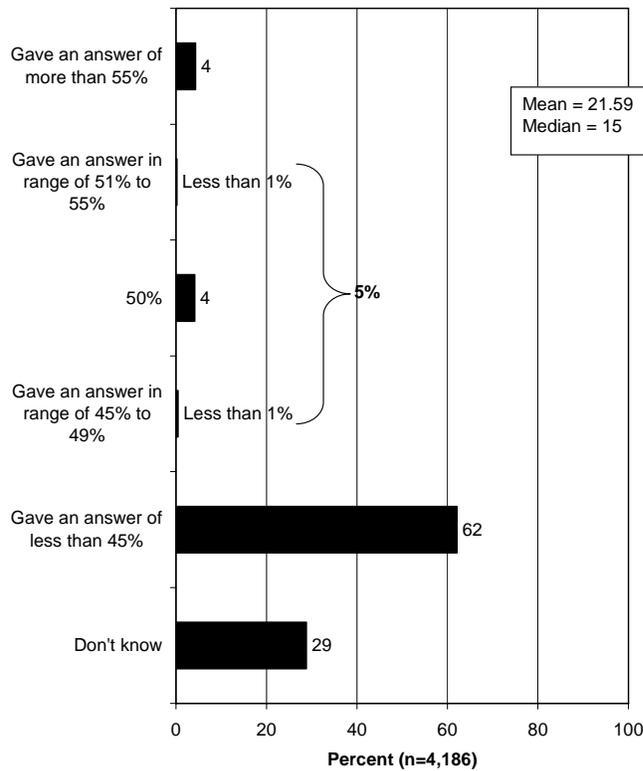
owned forests is just as important as stewardship of public forests (82% give this answer), and they otherwise are about evenly split.



**Figure 2.25. Importance of Stewardship of Privately Owned Forests Versus Stewardship of Public Forests**

The priority that respondents place on forest stewardship certainly depends in part on their perceptions of the importance of forests in their state and in the Northeastern Area as a whole. One question asked respondents to indicate the percentage of rural manufacturing jobs in the Northeastern United States that are forest-based. The estimate provided by the U.S. Forest Service (obtained from [www.na.fs.fed.us](http://www.na.fs.fed.us)) is that “about half” of rural manufacturing jobs are forest-based; therefore, for this analysis, any answer from 45 percent to 55 percent will be considered correct, and 5% give an answer within this range (Figure 2.26). However, a large majority of respondents (62%) underestimate the percentage, compared to only 4% who overestimate the percentage. An additional 29% answer that they do not know.

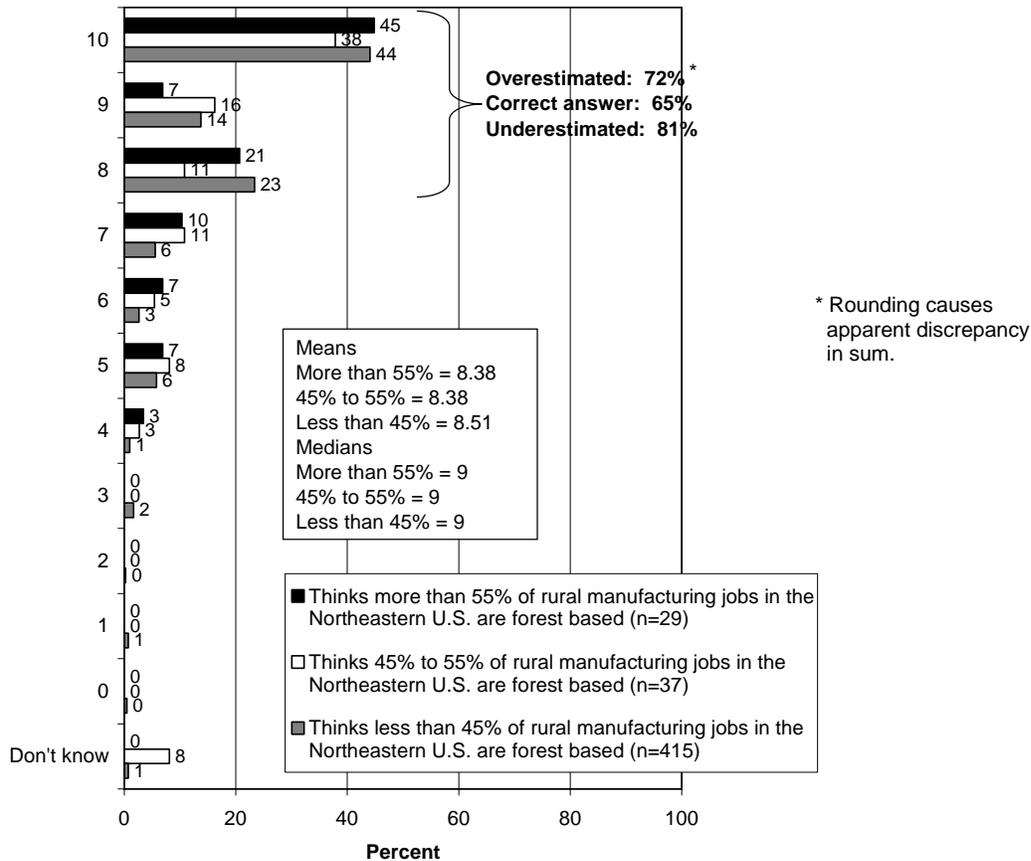
**Q32. About what percentage of rural manufacturing jobs in the Northeastern U.S. do you think are forest based?**



**Figure 2.26. Perceived Percentage of Rural Manufacturing Jobs That Are Forest-Based**

A crosstabulation explored the possible connection between perceptions of the prominence of forest-based jobs in the overall rural manufacturing economy and the importance attached to stewardship of privately owned forests. The results seem counterintuitive: those who *underestimate* the portion of all rural manufacturing jobs that are forest-related (the correct answer, as stated above, is about half) attach *more* importance to stewardship of privately owned forests, compared to those who *overestimate* the percentage or who give a correct answer (Figure 2.27), however the differences are *not* statistically significant. The pre-analysis conjecture was perhaps that the more importance attached to forest-based jobs, the more importance would be attached to forest stewardship, but this did *not* turn out to be the situation.

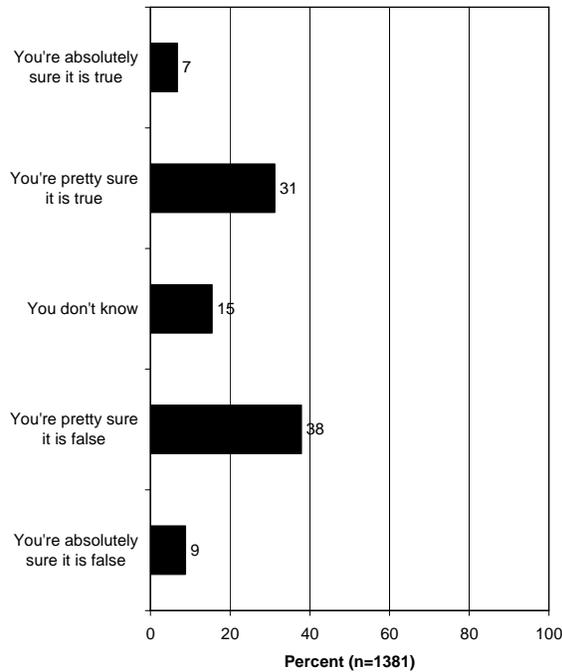
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.27. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Portion of Rural Manufacturing Jobs That Are Forest-Related**

Another knowledge question asked respondents to indicate the veracity of the statement, “The Northeastern U.S. is the most forested part of the nation in the percentage of land that is forested.” Rather than give this question using a pure true-false scale, in which people who guessed could not be differentiated from those who knew the correct answer (which is true), the scale that was used allowed for determination of guessing. Figure 2.28 shows that only 7% of respondents are *absolutely* sure of the correct answer, while 31% are not completely sure but give the correct answer. On the other hand, 47% answer incorrectly, and this group of people may attach a *higher* priority to the importance of stewardship of privately owned forests because they think that there is less forested land in the Northeastern Area than there actually is.

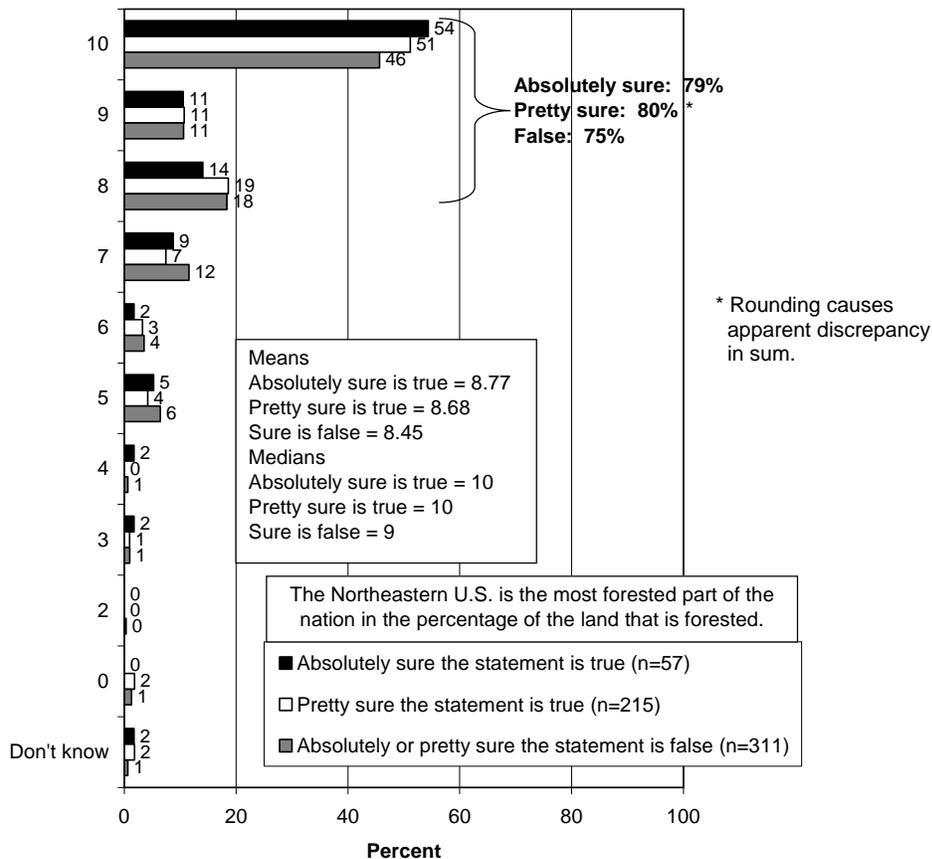
**Q35. Please tell me if the following statement is true or false: The Northeastern U.S. is the most forested part of the nation in the percentage of the land that is forested.**



**Figure 2.28. Knowledge of Whether the Northeastern United States Is the Most Forested Part of the Nation**

There was some conjecture that, in this instance, misinformed people might have a more favorable attitude about forest stewardship in the Northeastern Area relative to informed people—it was thought that perhaps those who do *not* think the Northeastern Area is the most forested part of the nation would otherwise value forest stewardship the most. However, the opposite was found. Those who are absolutely sure that the Northeastern Area is the most forested part of the nation have the highest mean rating of the importance of stewardship of privately owned forests (Figure 2.29). Note that the differences on this question are slight, however, and are *not* statistically significant.

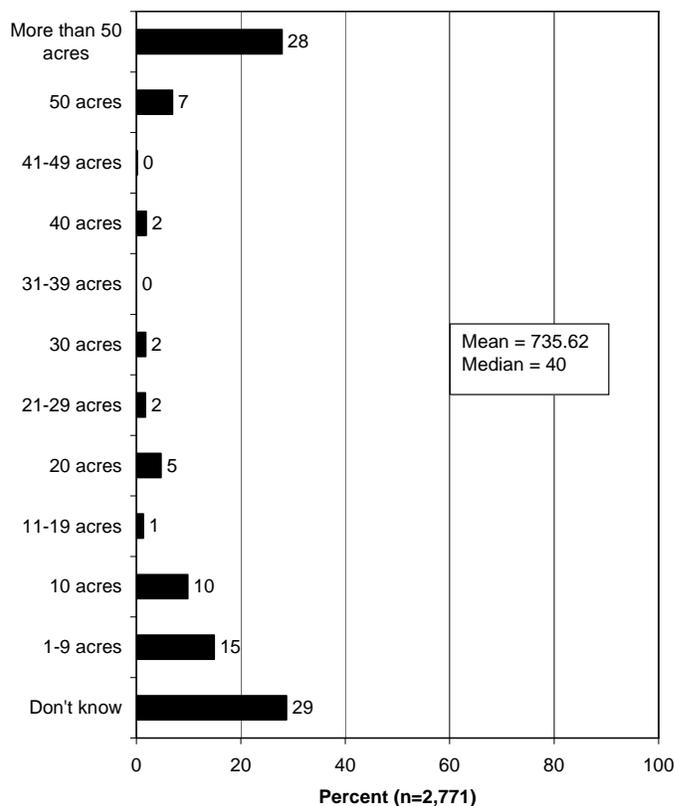
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.29. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Knowledge That the Northeastern Area Is the Most Forested Part of the Nation**

There is another question that could pertain to the priority people place on the stewardship of privately owned forests: the minimum tract size for a tract to be considered a forest. In this question, it may be that tract size affects the perceived importance of stewardship of privately owned forests. To examine this, Figure 2.30 shows the results of the question regarding tract size. It shows that a 20-acre tract would be large enough to be considered a forest by 31% of respondents and that the median answer regarding the minimum size tract to be considered a forest is 40 acres. A relatively large percentage (29%) answered that they do not know.

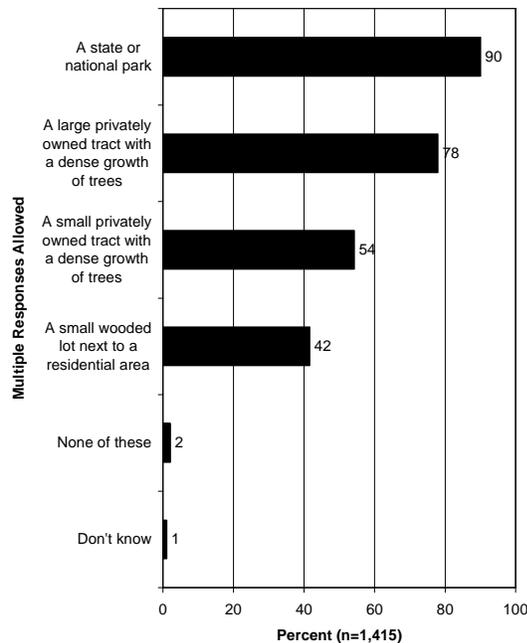
**Q21. How large should a tract of land be to be considered a forest?**



**Figure 2.30. Perceptions of Minimum Tract Size to Be Considered a Forest**

The survey also used another approach to help assess the perceptions of the size that a tract needs to be to be considered a forest. Respondents were read a list of four items that had relative terms (rather than the absolute term of the specific number of acres as in the question previously discussed), and respondents were asked to indicate if each qualified as forest land, in their opinion. Not unexpectedly, a large percentage (90%) say that a state or national park qualifies as forest land, and this item was included as a baseline against which to assess the next three items, all private land (Figure 2.31). While 78% say that a “large privately owned tract with a dense growth of trees” qualifies as a forest—a description specifically chosen to be representative of the prime type of land targeted by the Forest Stewardship Project—the converse is that 22% do not. Next in the ranking in the types of land that qualify as forest are a “small privately owned tract with a dense growth of trees” (54% consider this to be forest land) and a “small wooded lot next to a residential area” (42%).

**Q26. Please tell me if you think each of the following qualifies as forest land.**



**Figure 2.31. Perceptions of Types of Tracts That Qualify as Forest Land**

The focus groups extensively discussed what distinguished a forest, and size was a very important criterion, and it is a criterion on which another difference depended—a large size allows for more biodiversity. Several focus group comments are particularly applicable:

“We call ‘a woodlot’ the woods. Where I grew up, there was a woods behind my house. A forest, to me, is acres and acres of trees. Hundreds of acres.” —Ohio participant

“I think anything twenty-five acres and up would be a forest, and a woodlot could be as small as a half-acre. There are certainly more woodlots in the area than forests.” —Ohio participant

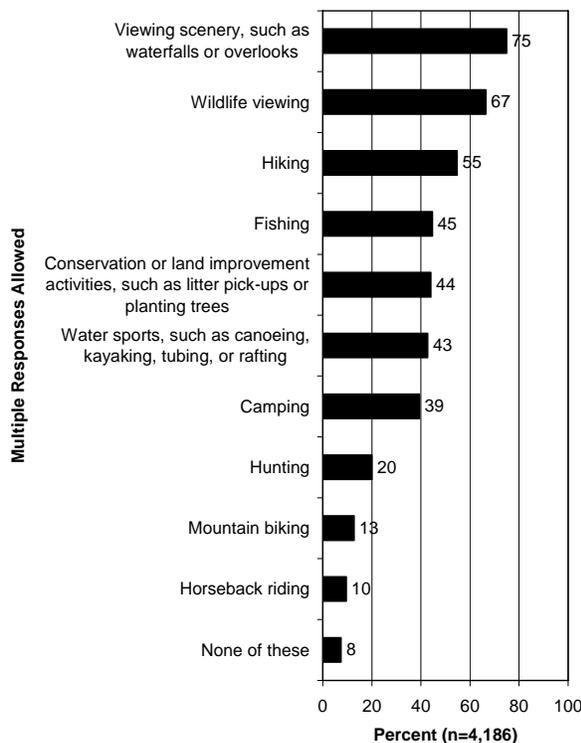
“I think forests are bigger than woods. Forests are more dense. Generally I think of forests as being nationally owned or owned by the state—national forests or state parks. And I live in the woods, not the forest.” —New Hampshire participant

“I guess the difference between woods and forest is that forests would be more of an ecosystem that supports wildlife, while a woods would be more of a small plot that wouldn’t be able to sustain more than squirrels.” —Wisconsin participant

[Regarding forests:] “I think of a whole landscape of pines or hardwoods together for squirrels and turkey and deer. Just habitat for animals is what I think of.”  
 —Wisconsin participant

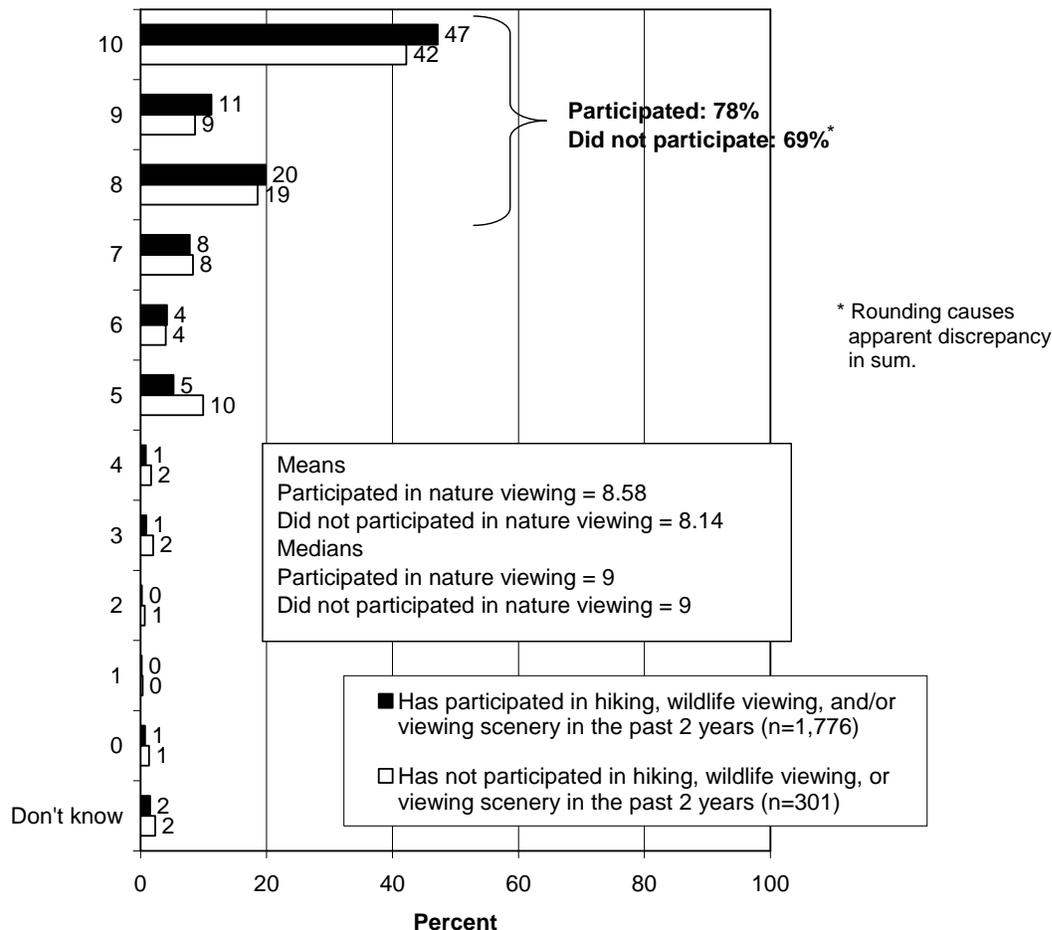
One question asked respondents if they had participated in any of several listed activities that are, in part, forest-based or at least often carried out in forests, such as wildlife viewing and hiking. Participation in various activities would possibly affect the priority people place on the stewardship of privately owned forests (even if they may participate in these activities primarily on public land). The top activities, ranked by the percentage who have done them in the past 2 years, are viewing scenery (75% have done this), viewing wildlife (67%), and hiking (55%) (Figure 2.32). For these people, aesthetic considerations may affect the priority they place on forest stewardship in general as well as private forest stewardship. To test this, a crosstabulation was run of ratings of the importance of forest stewardship by participation in any of these three activities. This crosstabulation found that those who participated in viewing scenery, viewing wildlife, or hiking give higher ratings of the importance that stewardship of privately owned forests should be, compared to those who did not participate in any of these activities (Figure 2.33). The overall differences on that question are statistically significant ( $p \leq 0.05$ ), and the differences in those giving a rating of “8” or higher is also statistically significant ( $p \leq 0.001$ ).

**Q16. I'd like you to tell me if you have participated in any of the following activities in the past 2 years.**



**Figure 2.32. Participation in Outdoor Activities**

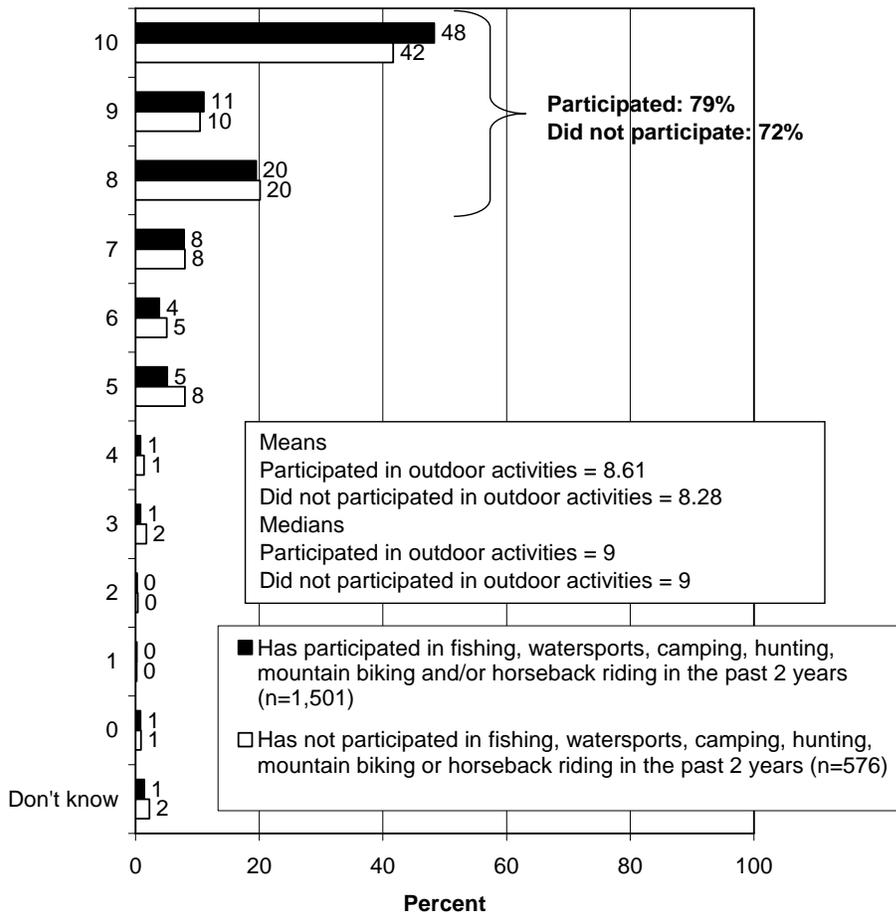
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.33. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Participation in Viewing Scenery, Viewing Wildlife, or Hiking**

Likewise, those who fished, engaged in water sports, camped, hunted, mountain biked, or rode horses—all fairly active outdoor activities—may place importance on recreational values, which, in turn, may affect the priority they place on forest stewardship. Again, participants give slightly higher ratings than do non-participants on the question about the importance that stewardship of privately owned forests should be (Figure 2.34). The differences in the percentages giving a rating of “8” or higher are statistically significant ( $p \leq 0.01$ ).

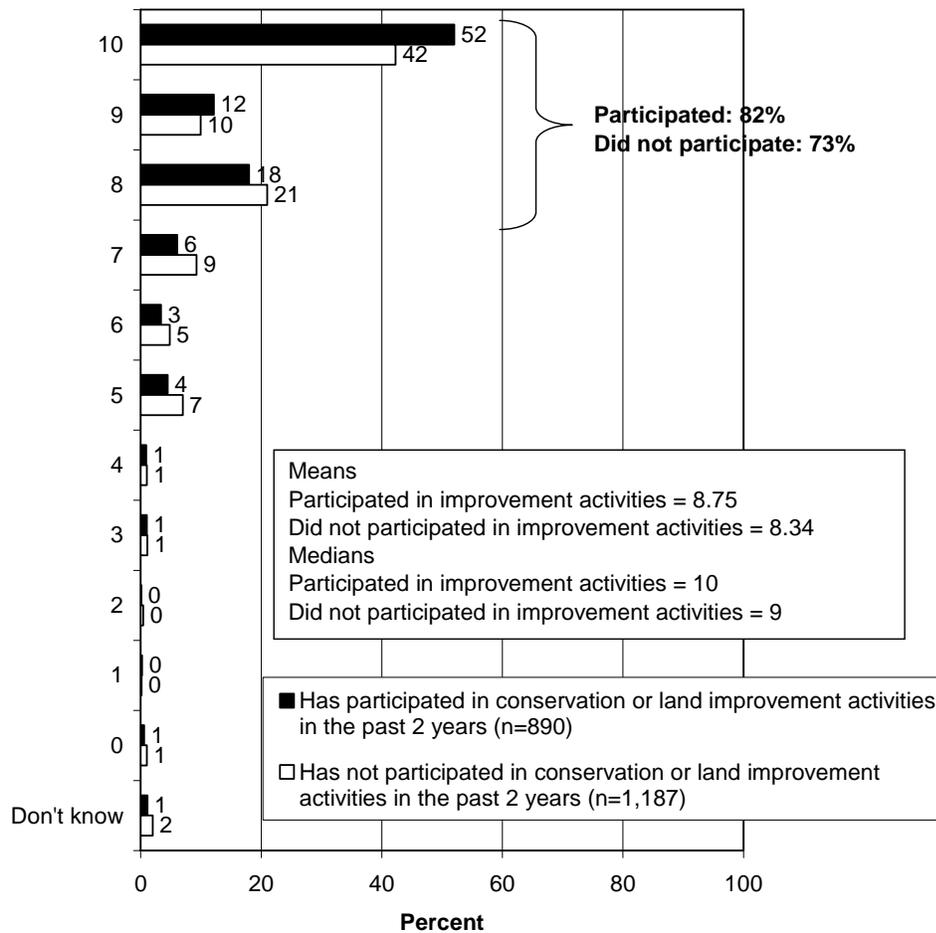
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.34. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Participation in Active Outdoor Activities**

Another crosstabulation from the participation question found that those who have engaged in conservation or land improvement activities give higher ratings to the importance that stewardship of privately owned forests should be, compared to non-participants (Figure 2.35) ( $p \leq 0.001$ ).

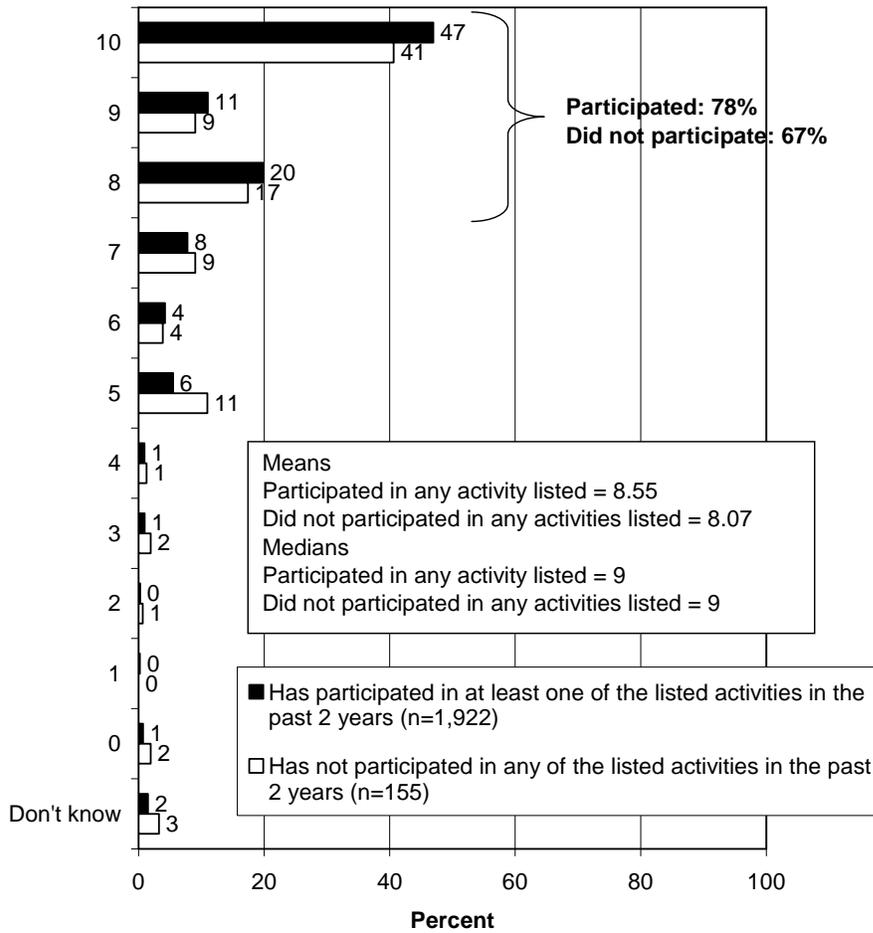
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 2.35. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Participation in Conservation**

Finally, inactive people also may prioritize forest stewardship differently than other people, and this latter group was used in a crosstabulation, as well. This crosstabulation shows that those who did *at least one* of the listed activities, compared to those who did none, give higher ratings to the importance that stewardship of privately owned forests should be (Figure 2.36), with the difference in the percentages giving a rating of “8” or higher being statistically significant ( $p \leq 0.01$ ).

**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



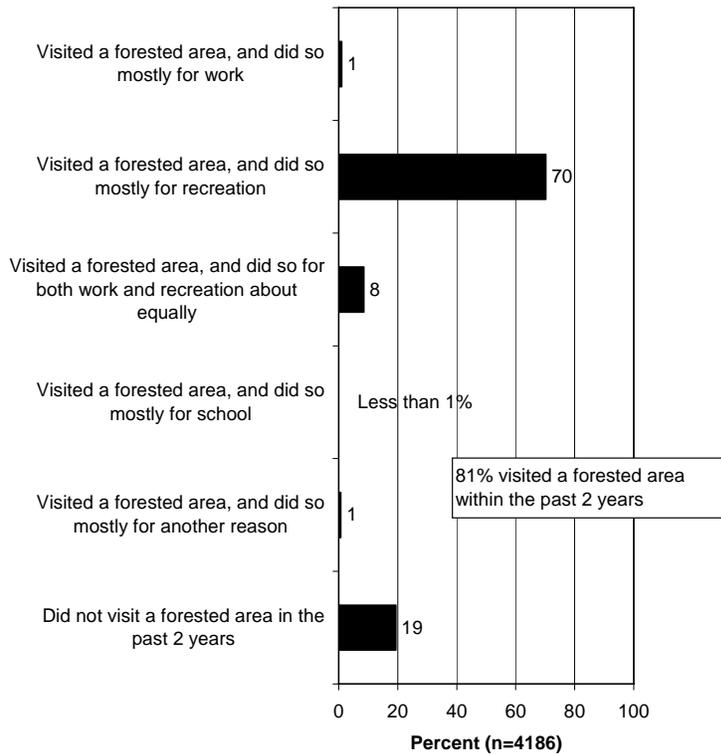
**Figure 2.36. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Participation in Any of the Listed Activities**

## CHAPTER 3. ATTITUDINAL CONSTRAINTS TO PARTICIPATION IN THE STEWARDSHIP PROGRAM

The most basic constraint to participation in the Forest Stewardship Project is whether the respondent owns land that would be eligible. While this study's intent was *not* to determine the percent of the general population that owns a tract that would be eligible for the Forest Stewardship Project, the survey did ask respondents if they owned land that is or could be considered forest land and the size of those tracts. These questions were primarily for crosstabulations. A quarter of respondents (25%) indicated owning forest or potential forest land, and the median amount owned (calculated among those who own land) is 10 acres. Note that the intent of the study was not to determine the percentage of the population that has eligible land because local geographic and land-use factors are too numerous and vary so widely throughout the study area to allow a generalization of the Northeastern Area on a survey question.

One simple attitudinal constraint to involvement in the Forest Stewardship Project, and a most basic constraint, relates to whether people have any experience in forested areas. Fortunately, a large majority of respondents (81%) have visited what they consider to be a forested area within the past 2 years, and most of them did so for recreation (Figure 3.1). Nonetheless, a not insubstantial percentage of residents of the Northeastern Area (19%) have not visited what they consider to be a forested area in the past 2 years, suggesting that these latter people are disconnected from forest issues.

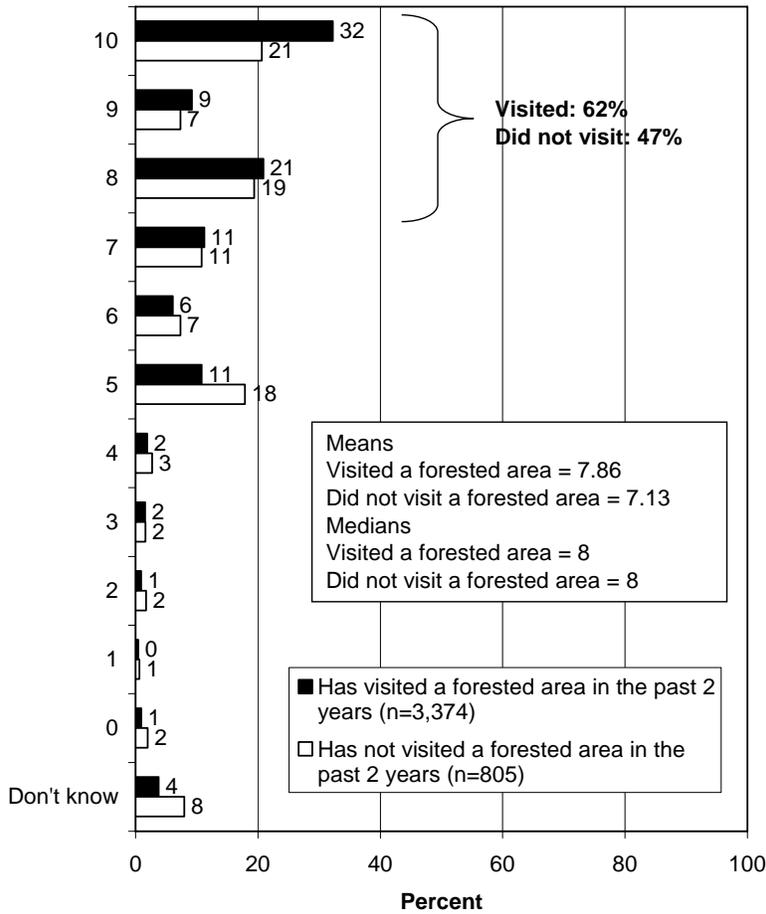
**Q17. I'd like to know if you have visited a forested area, including just woods, for any purpose in the past 2 years? Q18. Were your visits to forests or woods in the past 2 years mostly for work, for recreation, or for both about equally?**



**Figure 3.1. Percent Who Visited a Forested Area Within the Past 2 Years**

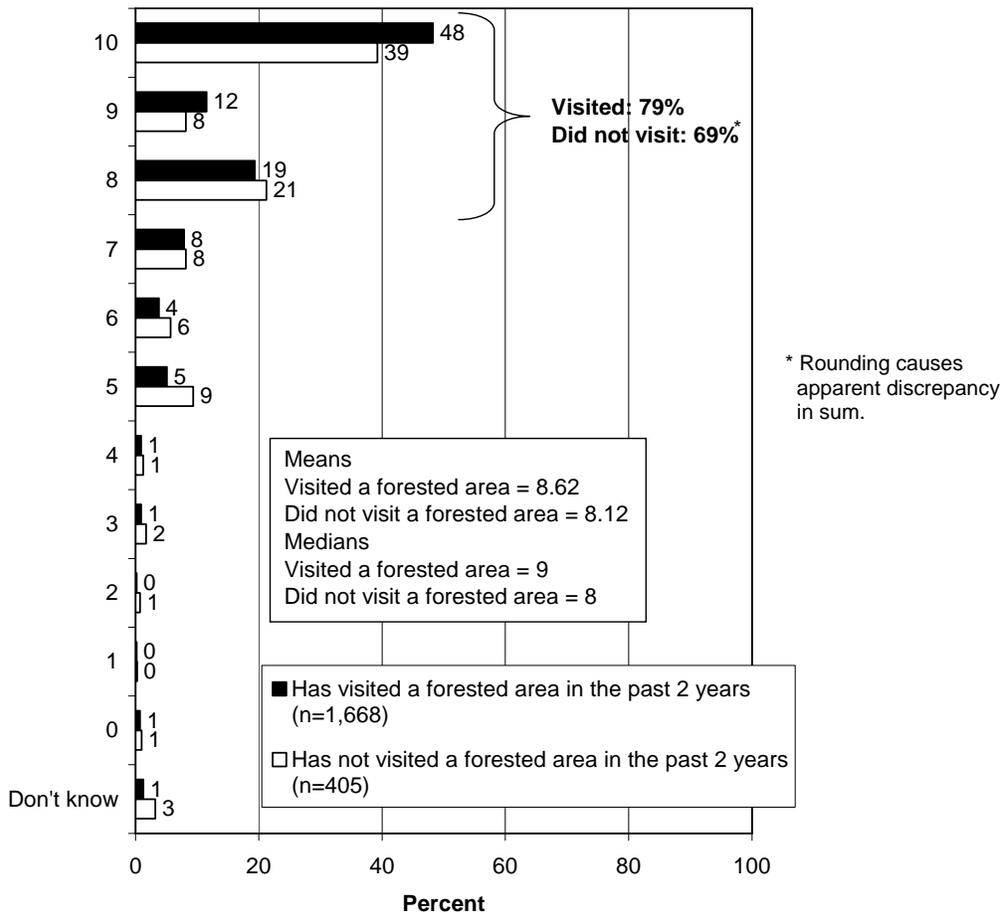
To help assess whether attitudes towards forests are affected by visitation to a forested area, Q38 (the importance of privately owned forests for the overall health and quality of forests) and Q79 (the importance that forest stewardship should be for private landowners) were both crosstabulated by having visited a forested area versus not having visited a forested area. On both of these questions, the higher ratings are given by those who have visited a forested area (Figures 3.2 and 3.3) (for both,  $p \leq 0.001$ ).

**Q38. In your opinion, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important, how important are privately owned forests to the overall health and quality of all forests in [STATE OF RESIDENCY]?**



**Figure 3.2. Ratings of the Importance of Privately Owned Forests to the Overall Health and Quality of Forests Crosstabulated by Visitation to a Forested Area**

**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 3.3. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Visitation to a Forested Area**

Recall that previously the report examined perceptions of tract size necessary for a tract to be considered forest land. The results’ applicability to this section regarding constraints is when the tract size deemed to be forest is so large that it excludes those who actually are eligible to participate. On this question, 40% of respondents do *not* consider 20 acres to be large enough to be considered forest land—in effect, their threshold is so high as to be a constraint to their participation in the Forest Stewardship Project (see Figure 2.30).

Also previously explored was the question that asked respondents to rate the importance of privately owned forests to the overall health and quality of forests. As Figure 2.8 showed, the vast majority of respondents give a high rating. However, 12% of respondents give a rating of the midpoint (“5”) of the scale, and 6% give a rating below the midpoint. Certainly, for these 18% of respondents, their opinion is an attitudinal constraint to participation in the Forest Stewardship Project.

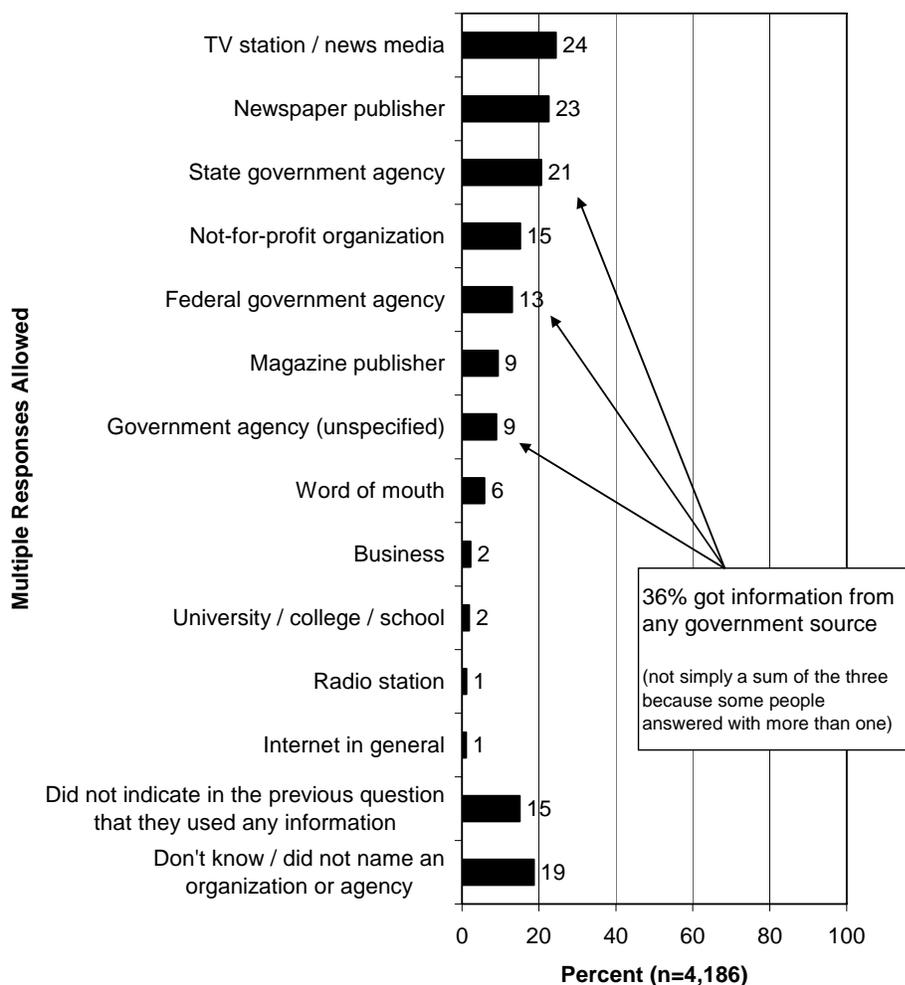
Likewise, Figure 2.10 previously discussed in Chapter 2 showed that the majority of respondents give a high rating to the importance of privately owned forests to the overall ecosystem of their state. Again, however, 13% of them give a rating of the midpoint or lower (rounding causes apparent discrepancy in sum), and this opinion is an attitudinal constraint to participation in the Forest Stewardship Project.

Thus far, this chapter discussed visitation to forests as it affects constraints to forest stewardship, and it discussed perceptions of forest health and the state’s ecology as they relate to constraints. An additional perception that comes into play is the general public’s reaction to the term, “forest stewardship.” While this will be discussed more fully in the next chapter about words, terms, and messages that resonate, the applicability of the findings here is limited to whether people have a *negative* reaction to the term or whether they understand what the term means, as a negative reaction or a misunderstanding might be a constraint. Fortunately, the overwhelming majority of respondents do *not* have a negative reaction to the term: only just under 1% have a negative reaction (e.g., “a group wanting to take it over,” “being told what to do,” “government trying to take over private land,” “government intrusion”). Therefore, it does *not* appear that this is a worrisome constraint.

On the other hand, just over a quarter of respondents (26%) do not know what the term, “forest stewardship,” means. For these people, not knowing the term itself may be a constraint to participation in forest stewardship. Furthermore, these people who do not know the term would be open to the first suggestion regarding its meaning, and incorrect information given to these people at this time may solidify them in a position contrary to the goals of the Forest Stewardship Project. In short, the first group that gets to these people can set the definition of forest stewardship, whether correct or not. This question and its accompanying graph are discussed more fully in the next chapter and were discussed here only as they pertain to attitudinal constraints.

A final consideration in this chapter regarding constraints relates to the sources people use to obtain information about forests and forest-related issues. Similar to the above discussion of the term, “forest stewardship,” misinformation can become a constraint, either because people become convinced that forest stewardship is not important or because they attach a negative connotation to forest stewardship (e.g., that it is an intrusion by the government). Figure 3.4 shows the sources that have provided people with information about forest-related issues. Government agencies together make up the top source of information on forest-related issues, with 36% of respondents obtaining data from them. Major media companies (television stations/networks, newspaper publishers, and magazine publishers) and not-for-profit organizations are also important sources.

**Q220. What organizations or agencies provide that information about forest-related issues?**

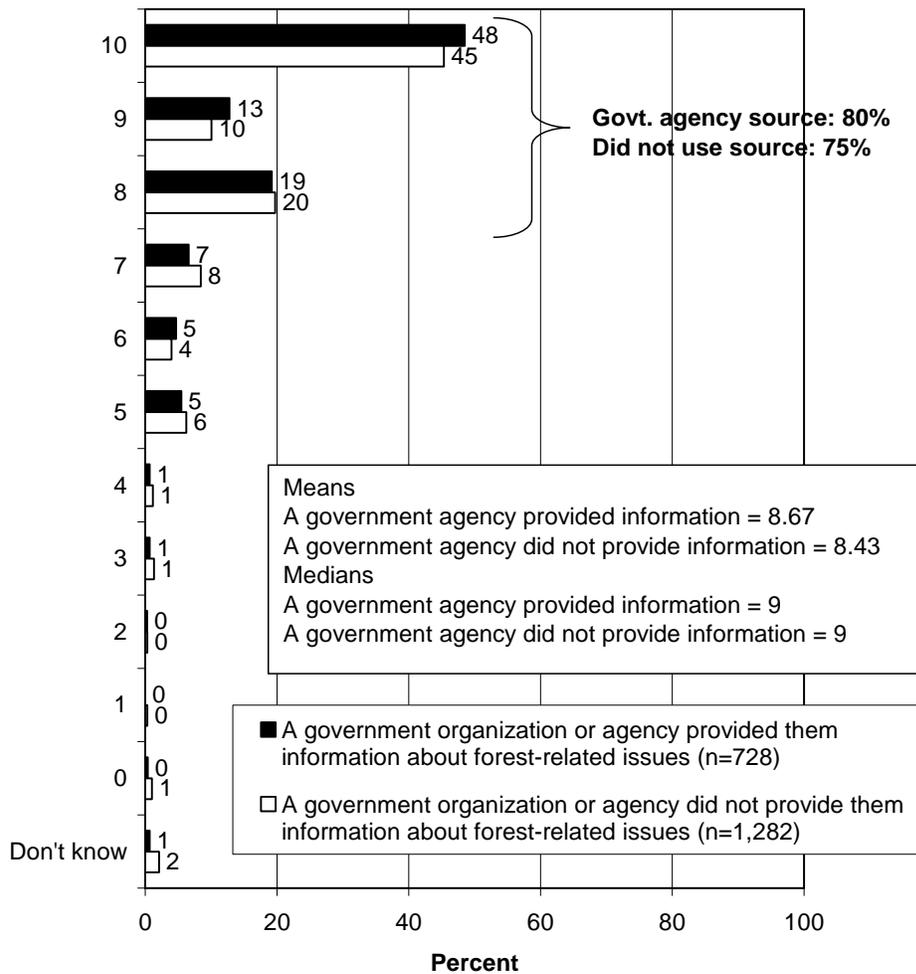


**Figure 3.4. Organizations and Agencies That Provide Respondents With Information About Forest-Related Issues**

To explore whether these various sources have any constraining effect on participation in forest stewardship, the question on sources of information was crosstabulated with Q79 about the importance that forest stewardship should be for private landowners. Three crosstabulations were run: those who get information from any government agency versus those who do not, those who get information from any not-for-profit organization versus those who do not, and those who get information from television news media versus those who do not. The crosstabulations show that those who obtain information about forest-related issues from government agencies or from television news media, compared to those who do not, are about

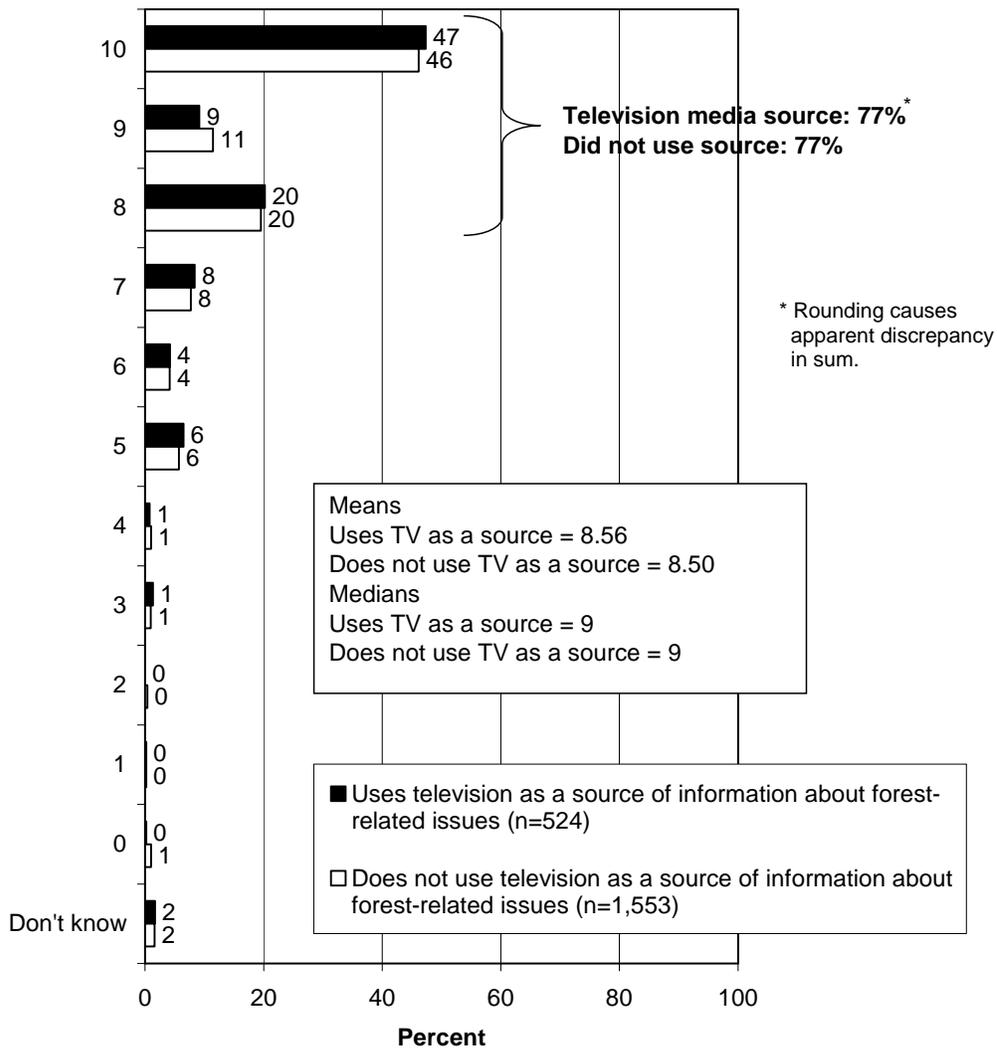
the same in their ratings of the importance that stewardship of privately owned forests should be (Figures 3.5 and 3.6). However, those who get information from not-for-profit organizations are more likely than are those who do not get such information to give higher ratings to the importance that stewardship of privately owned forests should be (Figure 3.7) ( $p \leq 0.05$ ).

**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



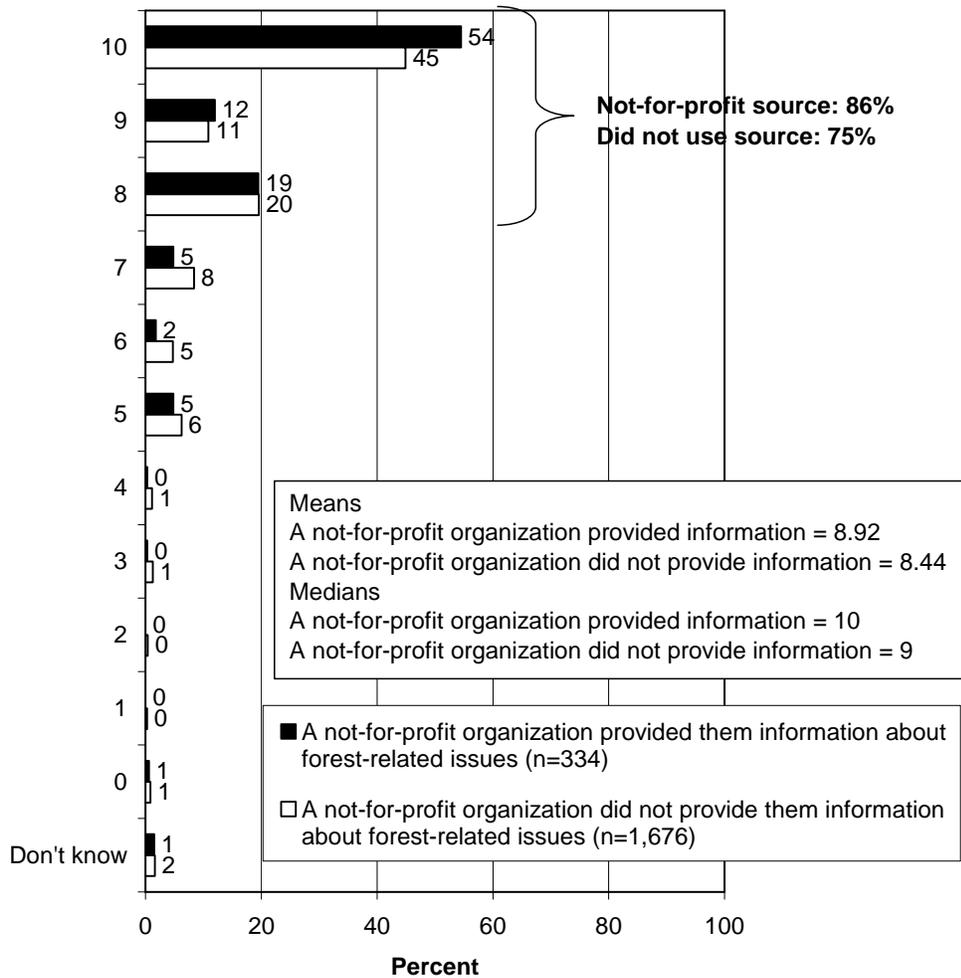
**Figure 3.5. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Source of Information—Government Agencies**

**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]?**



**Figure 3.6. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Source of Information—Television News Media**

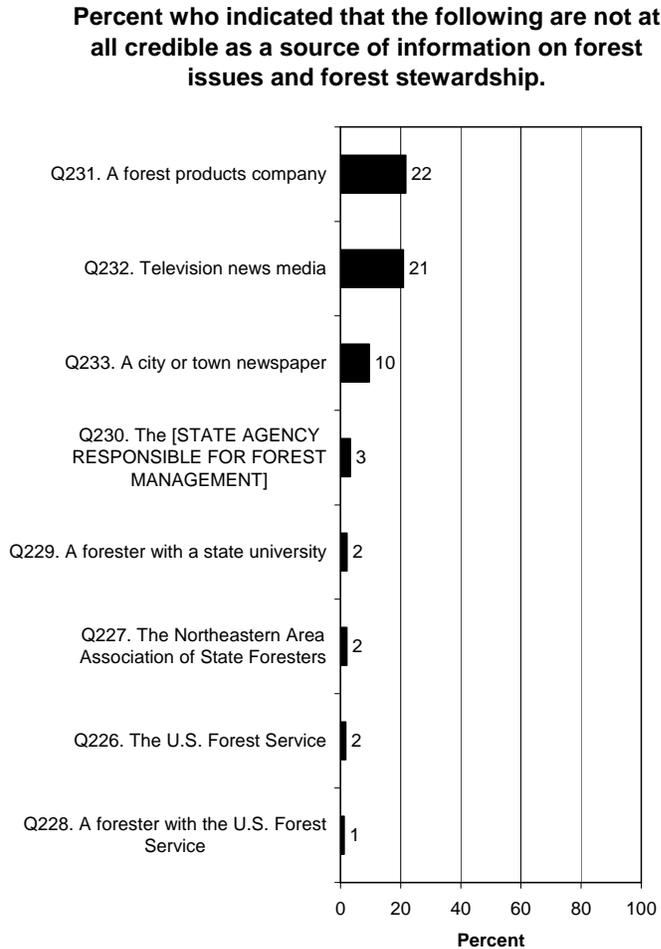
**Q79. In your opinion, how important should forest stewardship be for private landowners in [STATE OF RESIDENCY]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Figure 3.7. Ratings of the Importance of Stewardship of Privately Owned Forests Crosstabulated by Source of Information—Not-for-Profit Organizations**

Another set of questions that delved into sources of information asked respondents to rate the credibility of various information sources. Figure 3.8 shows that three of the eight sources listed in the survey have a substantial percentage saying they are *not at all* credible as a source of information on forest issues and forest stewardship: a forest products company (22%), the television news media (21%), and a city/town newspaper (10%). This finding applies to constraints simply because lack of credibility would be a constraint on receiving information

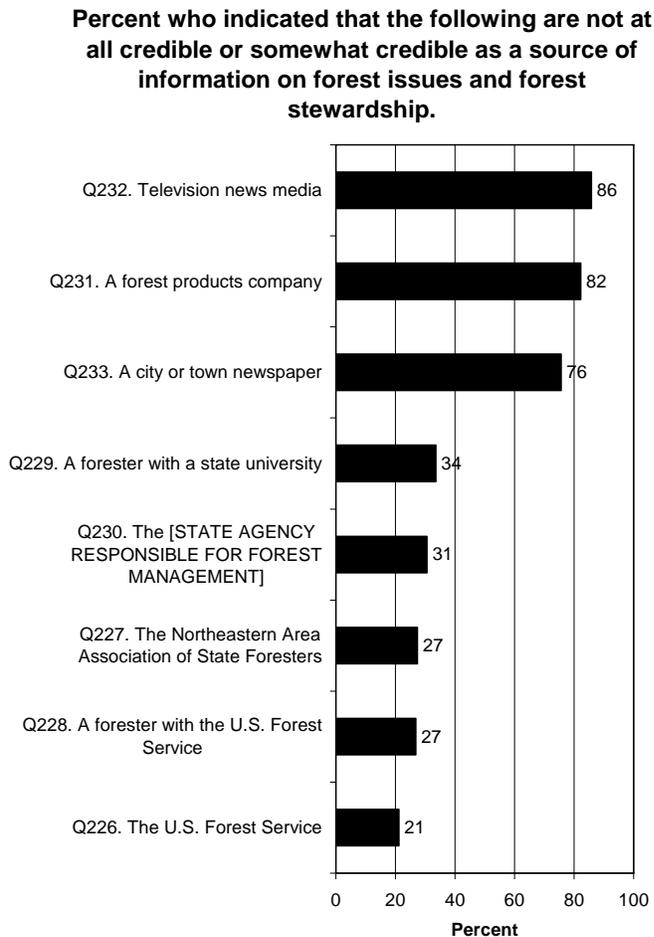
from that source. Fortunately, with such low percentages saying that they are *not at all* credible, it does not appear that government agencies or of the NAASF itself need worry that lack of credibility would act as an obstacle to getting people involved in forest stewardship.



**Figure 3.8. Extremely Negative Perceptions of Credibility of Various Sources of Information About Forest-Related Issues**

However, this is not to say that some people are not skeptical of government agencies—many people expressed skepticism in both the focus groups and in the survey. The above showed only those saying *not at all* credible. Another way to examine the data is to show the percentages who responded with *not at all* credible or *somewhat* credible—in other words, those who have enough concerns about credibility that they did not rate the source as *very* credible. Figure 3.9 shows that combination of those responses, and anywhere from a third (31% show some distrust of the state agency most responsible for forest management) to a fifth (21% show some distrust of the U.S. Forest Service) show enough skepticism that they do not give a rating of *very* credible. The NAASF is in the middle, with about a quarter (27%) rating the organization at best *somewhat* credible. These findings together with the above findings suggest that credibility

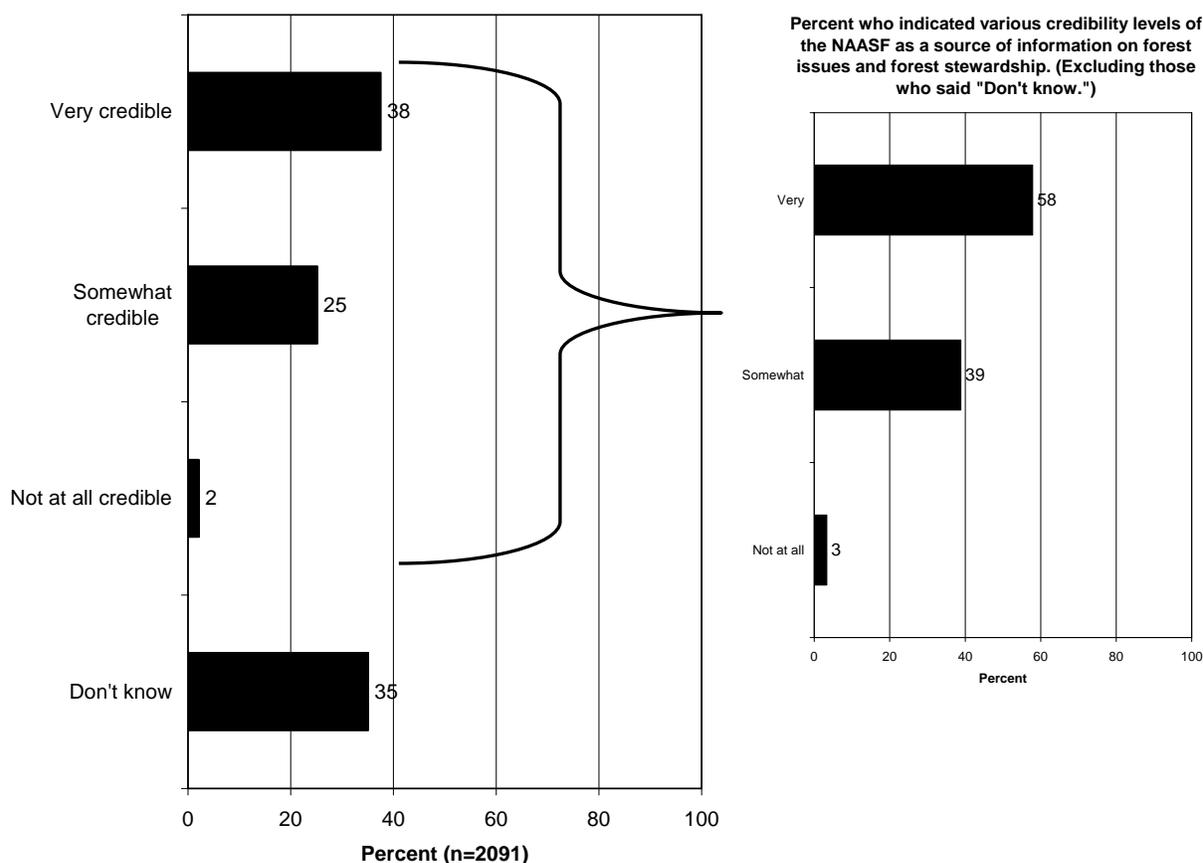
would best be thought of as a constraint to some people but not a complete obstacle vis-à-vis participation in the Forest Stewardship Project.



**Figure 3.9. Negative Perceptions of Credibility of Various Sources of Information About Forest-Related Issues**

Credibility specifically of the NAASF is shown in Figure 3.10. As discussed above, 27% of residents respond with either *somewhat* credible or *not at all* credible. An aspect of these findings that can only be seen in the graph of the individual question in Figure 3.10 is that a large percentage did not know what rating to give to the credibility of the NAASF. Again, disinformation at this stage can be a constraint to those 35% of Northeastern Area residents who as of yet have no idea of the NAASF's credibility regarding forest-related issues. Figure 3.10 includes the percentages calculated out of those who give a rating (it excludes the "don't know" respondents). At the current proportion, those who think the organization is *very* credible exceed those with some skepticism by approximately 3:2. Moving those 35% who currently do not know what rating to give into the ranks of those who give a rating of *very* credible will improve that approximate ratio.

**Q227. How credible would you say the Northeastern Area Association of State Foresters is as a source of information on forest issues and forest stewardship?**



**Figure 3.10. Perceived Credibility of the NAASF Among Northeastern Area Residents**

The focus groups also discussed credibility, showing that, despite positive results in the surveys regarding them, government sources of information are distrusted by some people, even for information as seemingly benign as “forest stewardship.” In particular, there is much wariness about any program that would entail any loss of control of land by the landowner or any program that appeared to be a government “intrusion.” Several focus group comments highlight the various feelings about the government and about the credibility of sources of information.

“The federal government isn’t credible. Just dealing with flood insurance or something like that—they have no idea what I do or deal with. State-level government, that’s a medium level of credibility. Myself, I like local-level government. They’re in your area, they know what’s there.” —Wisconsin participant

“Government’s mostly a miss in terms of credibility. One thing I can say about the Department of Environmental Control is that they’re not highly paid, so there’s not going to be a lot of people getting into the job because of the money. A lot of them are doing it for the love of the job, so that makes them a bit more credible to me. But the higher up you go, they’re making better money and trying to cover their butts and do political things.” —New York participant

“I think your local governments are more responsive to the individual. At the state and federal level, it takes forever to get anything done from those agencies.” —Wisconsin participant

“I don’t know: the government is lying to us, the companies are lying—the truth is always in the middle. Even nonprofit organizations have their biases.” —New Hampshire participant

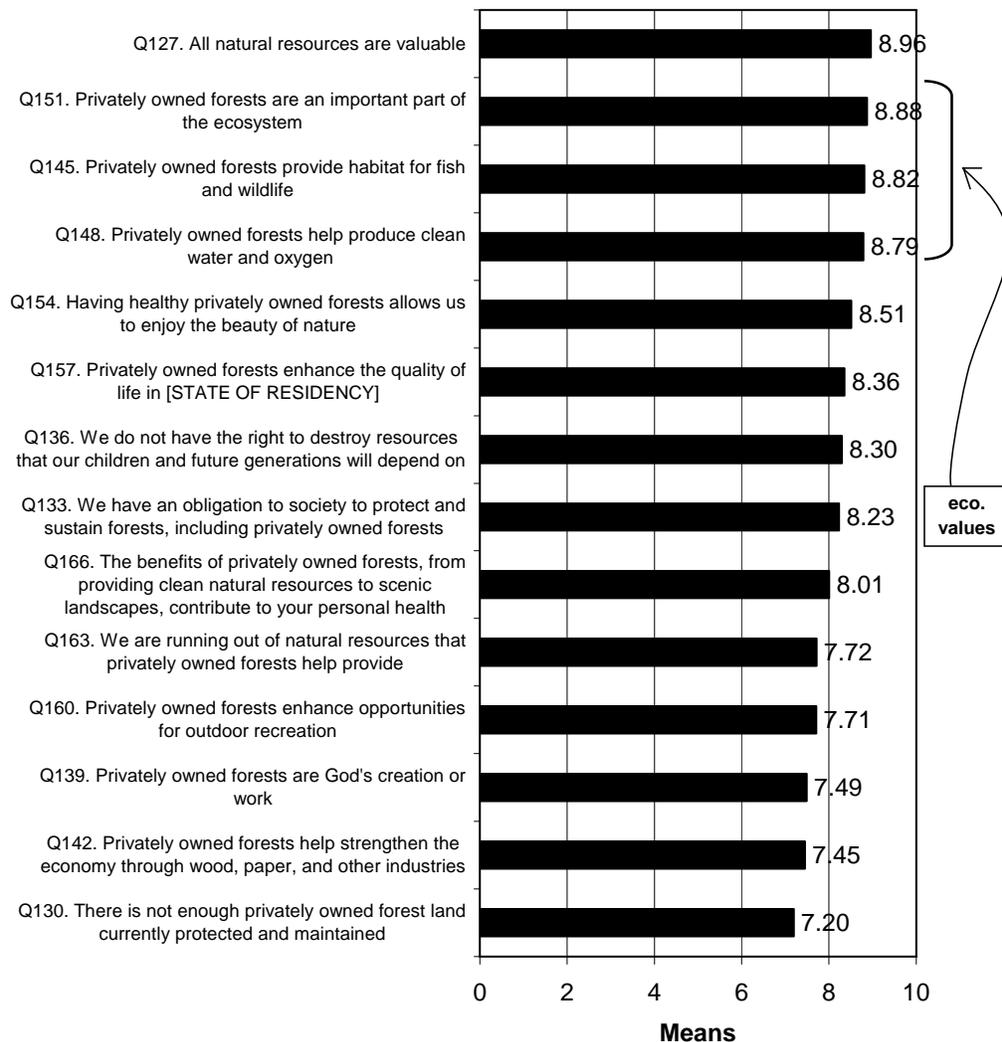
“If there were too much government control over the private landowner—if they mandated you to do something—then I would oppose the project. But if it was about a service to help me be a good steward, that would be different. Ultimately, in the end though, who’s paying for this? So much government is getting crammed down our throats. Who’s paying for all this? Was this stimulus money?” —Wisconsin participant

## **CHAPTER 4. WORDS, TERMS, AND MESSAGES THAT RESONATE**

The survey used several series of questions to assess attitudes toward various terms and messages and to see how the terms and messages were received relative to one another. Two sets of questions in particular illuminate the general public's opinion on messages. One set of questions asked respondents to indicate how convincing were various reasons for protecting, improving, restoring, and sustaining privately owned forests. The second set of questions asked respondents to rate the effectiveness of messages at increasing support of stewardship efforts. In both these series of questions, the order of the messages was randomized so that not all respondents received the same messages in the same order. This eliminates "order bias" in the results, which refers to the effect that previous questions exert on the results of any subsequent questions.

In the first of those series of questions, the survey presented 14 messages and had respondents rate how convincing they are as reasons to protect, improve, restore, and sustain privately owned forests. The 14 messages contain 8 messages that primarily relate to a direct human benefit, 3 that primarily relate to an ecological value, and 3 messages that do not fall into either category, and in looking at the ranking by the mean rating shown in Figure 4.1, 3 of the top 4 messages are those that primarily reflect ecological values: "Privately owned forests are an important part of the ecosystem" (mean rating of 8.88), "Privately owned forests provide habitat for fish and wildlife" (8.82), and "Privately owned forests help produce clean water and oxygen" (8.79). (Note that the top message, "All natural resources are valuable," with the highest mean rating at 8.96, could be considered to have both ecological and human values.)

**On a scale of 0 - 10 where 0 is not at all convincing and 10 is an extremely convincing reason, the mean rating of how convincing the following reasons are for protecting, improving, restoring, and sustaining privately owned forests.**

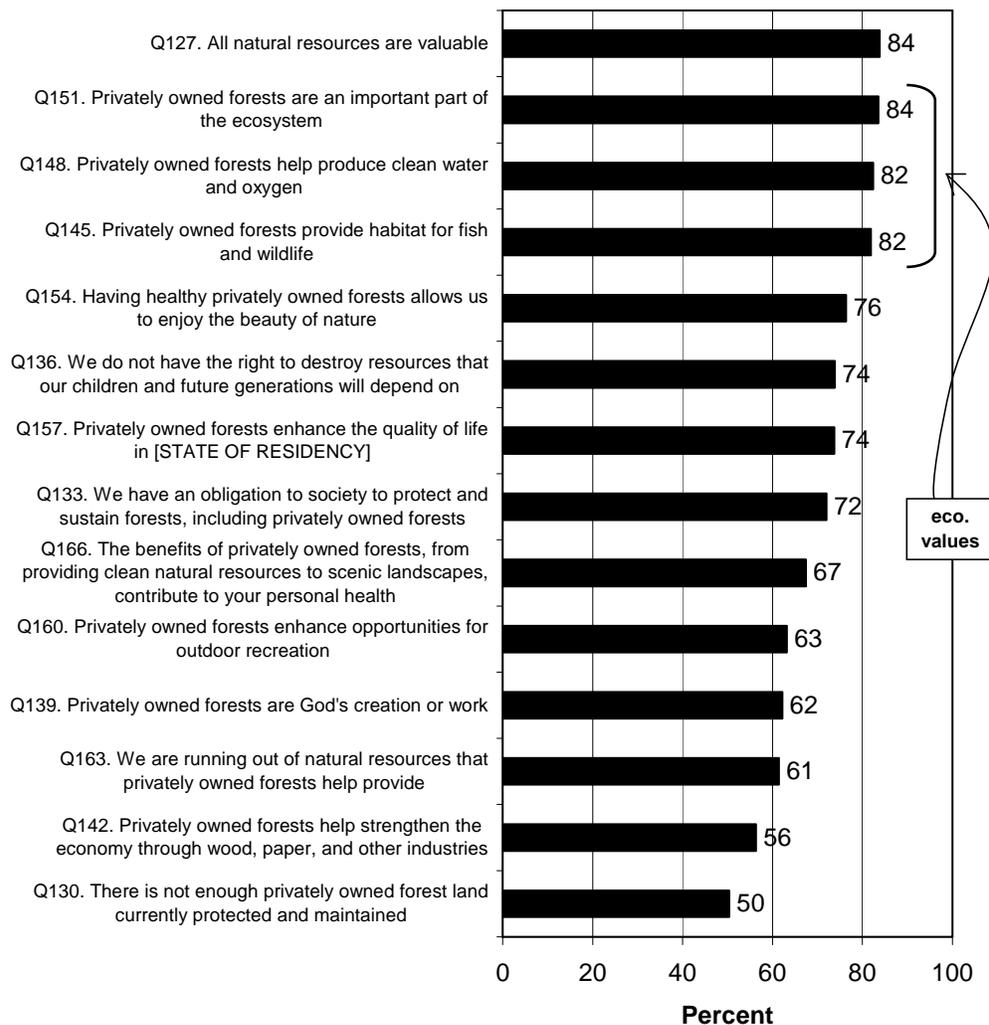


**Figure 4.1. Mean Ratings of How Convincing Various Reasons Are for Protecting, Improving, Restoring, and Sustaining Privately Owned Forests**

Figure 4.1 above shows the mean ratings on these questions. Another way to look at the results is to examine the percentage who give a high rating (an “8,” “9,” or “10”), in other words, who feel very strongly about each reason. This also points out that ecological values resonate well: again, of the 14 messages, 3 of the top 4 reflect ecological values (Figure 4.2). Each of these

ecological values has more than 80% of respondents giving it a high rating regarding how convincing it is as a reason to protect, improve, restore, and sustain privately owned forests.

**On a scale of 0 - 10 where 0 is not at all convincing and 10 is an extremely convincing reason, those who rated how convincing the following reasons are for protecting, improving, restoring, and sustaining privately owned forests as an 8, 9, or 10.**

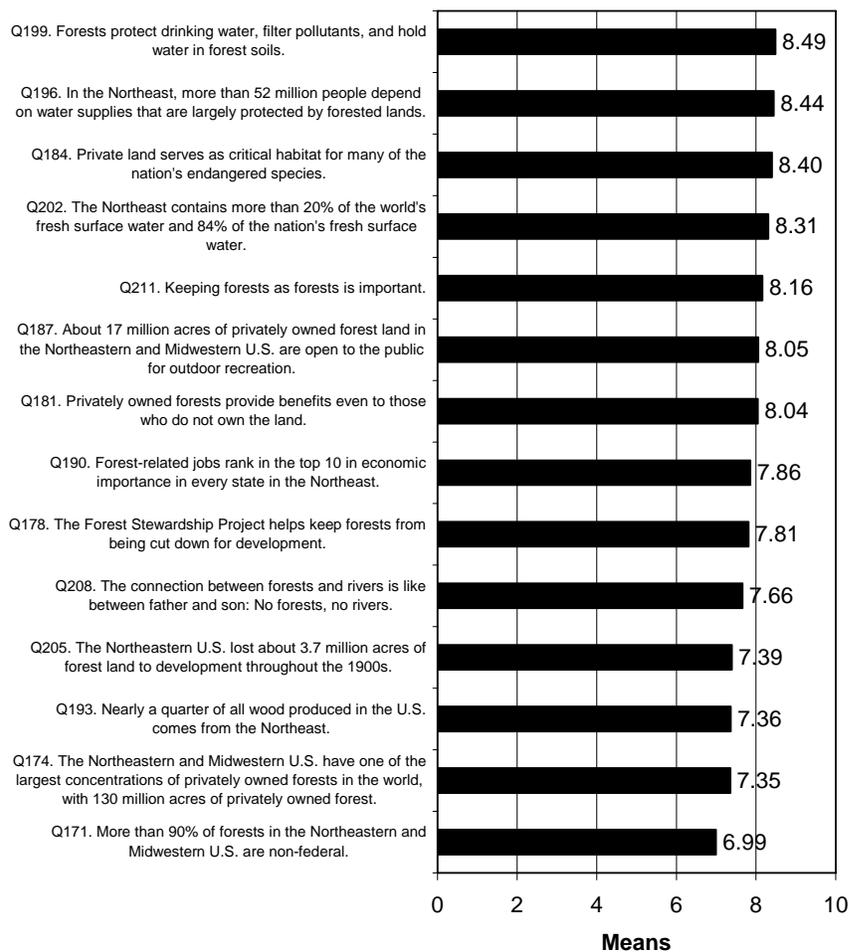


**Figure 4.2. Percent Who Give a High Rating of How Convincing Various Reasons Are for Protecting, Improving, Restoring, and Sustaining Privately Owned Forests**

The second set of questions that illuminates the general public’s reactions to terms and messages asked respondents to rate the effectiveness of various messages at increasing support for stewardship efforts of privately owned forests. Two graphs are shown for this series. The first

graph is of the mean rating (Figure 4.3). The ranking of the 14 statements by the mean rating shows that ecological values again do well, as 3 of the top 5 are ecological (“Private land serves as critical habitat for many of the nation’s endangered species,” “The Northeast contains more than 20% of the world’s fresh surface water and 84% of the nation’s fresh surface water,” and “Keeping forests as forests is important”); however, the top message contains both human and ecological values (“Forests protect drinking water, filter pollutants, and hold water in forest soils”), and the second-ranked message contains human values (“In the Northeast, more than 52 million people depend on water supplies that are largely protected by forested lands”). The commonality of the top messages is *water*.

**On a scale of 0 - 10 where 0 is not at all effective and 10 is extremely effective, the mean rating of effectiveness the following messages would be at increasing support of stewardship efforts for privately owned forests.**



**Figure 4.3. Mean Ratings of the Effectiveness of Various Messages at Increasing Support for Stewardship of Privately Owned Forests**

Conversely, at the bottom of the ranking are messages that detail the ownership of land (“More than 90% of forests in the Northeastern and Midwestern U.S. are non-federal” and “The Northeastern and Midwestern U.S. have one of the largest concentrations of privately owned forests in the world, with 130 million acres of privately owned forest”), that discuss economics (“Nearly a quarter of all wood produced in the U.S. comes from the Northeast” and “Forest-related jobs rank in the top 10 in economic importance in every state in the Northeast”), and that discuss development/urban sprawl (“The Northeastern U.S. lost about 3.7 million acres of forest land to development throughout the 1900s” and “The Forest Stewardship Project helps keep forests from being cut down for development”).

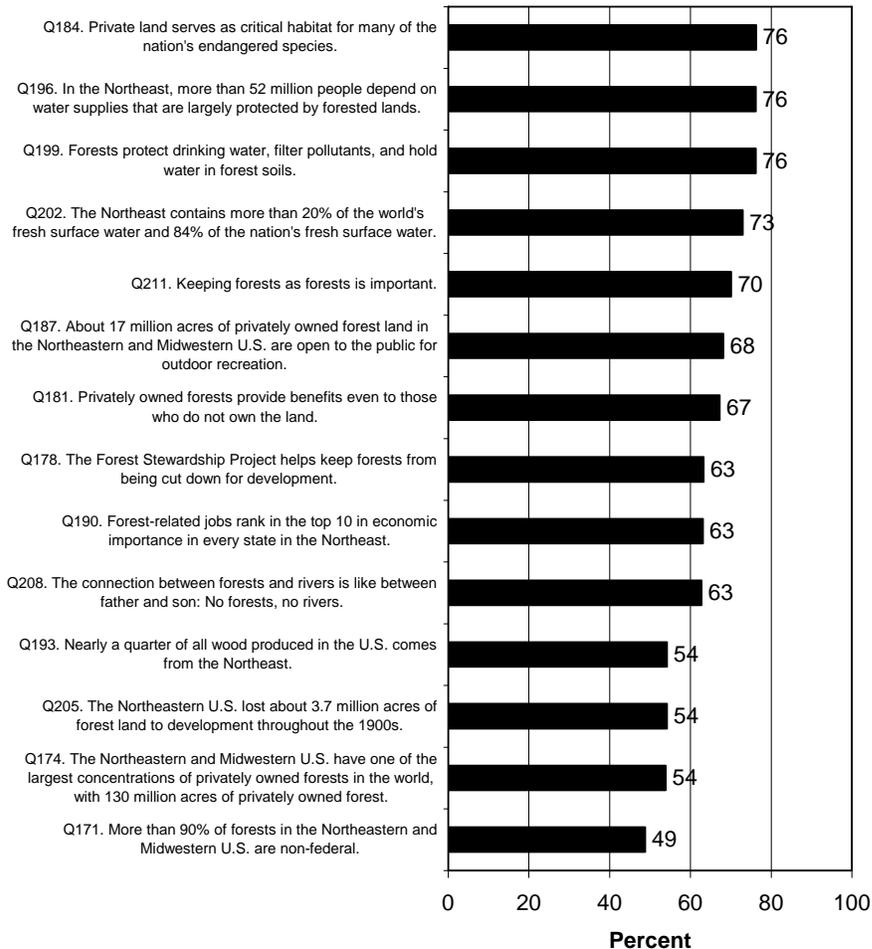
The next graph of this same series shows the percent who give a rating of “8” or higher (Figure 4.4). For the most part, it reiterates the above findings, with the nuance difference being that it shows the percent who feel very passionate about the particular messages—passionate enough to rate it so high. The ecological message about endangered species is the top-ranked message, but this is followed by the purely human value of drinking water supplies. However, regardless of whether the message is more oriented toward ecological values or human benefits, the commonality at the top again is *water*.

In addition to the very direct findings just discussed in this chapter, some findings presented in previous chapters has utility in assessing words, terms, and messages that resonate. Previously, findings in Chapter 2 suggested that terms pertaining to ecological values are rated higher in importance than are terms relating to human benefits. Specifically, Figure 2.14 in Chapter 2 found that clean air, fish and wildlife habitat, and clean water resonate in importance more than do recreation, wood products, and timber and lumber, as things that privately owned forests should provide. This suggests that messages concerning ecological values will resonate among more people than will messages concerning human benefits from privately owned forests.

Likewise, another series of questions previously discussed in Chapter 2 showed that wildlife and habitat resonate among more people than do “an investment in the future,” “pollution reduction,” and “a place for children to learn” (see Figure 2.22 in Chapter 2). These findings reiterate that ecological values resonate well.

Also in Chapter 2 are findings of the series of questions asking respondents to rate the importance that privately owned forests in their state be various things (e.g., be healthy, be protected). This series of questions found that *healthy* is the top term in the ranking by the mean ratings (see Figure 2.23 in Chapter 2). *Protected* and *conserved* also resonated well, while *productive* was the lowest ranked.

**On a scale of 0 - 10 where 0 is not at all effective and 10 is extremely effective, those who rated the effectiveness the following messages would be at increasing support of stewardship efforts for privately owned forests as an 8, 9, or 10.**

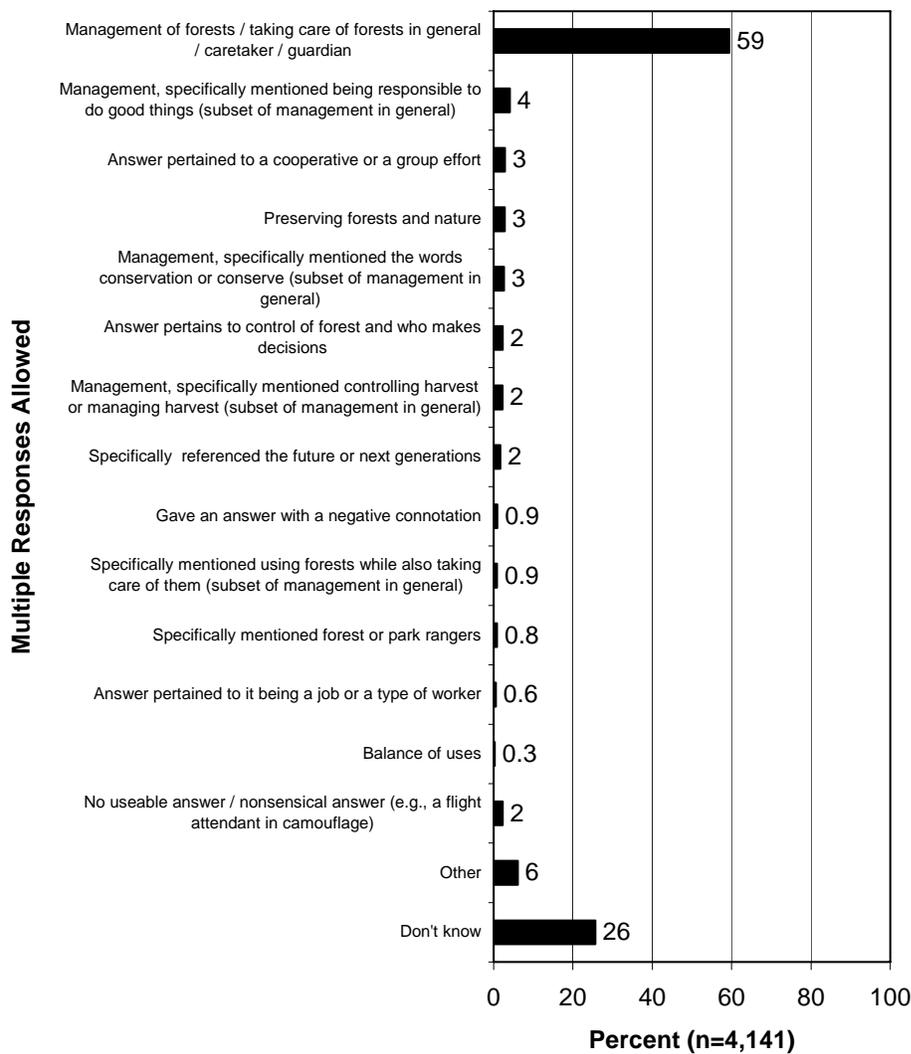


**Figure 4.4. Percent Giving a Rating of “8,” “9,” or “10” to the Effectiveness of Various Messages at Increasing Support for Stewardship of Privately Owned Forests**

Previously, this chapter discussed questions presented in *series* that allowed assessments of terms and messages relative to one another. Another line of questioning in the survey asked respondents in a single open-ended question (meaning no answer set is presented, and respondents can respond with anything that comes to mind) what they think of when they hear the term, “forest stewardship.” The majority of respondents (59%) give an answer indicating that the term means management of forests or taking care of forests in general (Figure 4.5). Some subsets of items within this overall umbrella include management because it is the *responsible* thing to do (4%), management in conjunction with a specific mention of *conserving*

or *conservation* (3%), management that specifically mentions *harvest but not overharvesting* (2%), and management in conjunction with *taking care* of the forests (approximately 1%). Other common responses relate to a *cooperative* or *group effort* (3%) and *preserving* forests and nature (3%). Otherwise, reactions are quite diverse, but mostly positive. Only approximately 1% have a negative reaction. However, a substantial percentage (26%) do not know the term or do not know what association to make with the term.

**Q75. What do you think of when you hear the term 'forest stewardship'?**

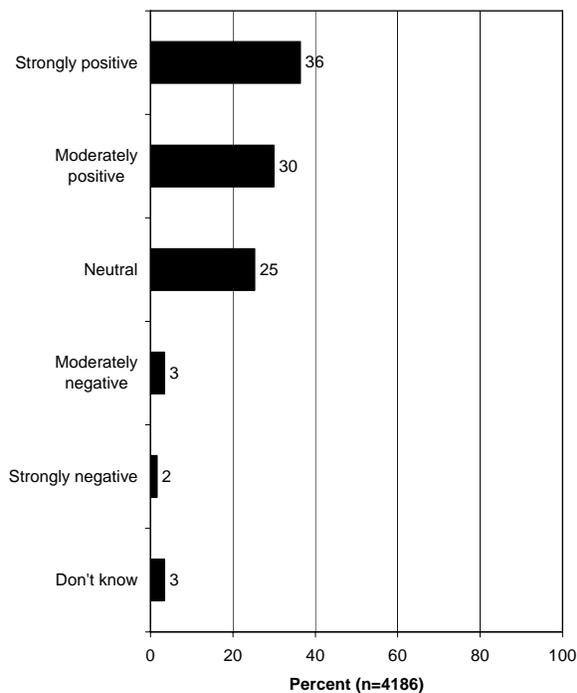


**Figure 4.5. Reactions to the Term, “Forest Stewardship”**

The focus groups also discussed the term, “forest stewardship.” While reactions were mostly positive, there was some dissension. For instance, one New Hampshire participant said, “I think ‘stewardship’ is too academic a term. It’s a great descriptive word, but people don’t know what it means. It’s vague.”

Another question asked respondents to indicate if they have a positive, neutral, or negative reaction to the term, “sustainable management.” A large percentage of respondents (66%) say that they have a positive reaction, about evenly divided between a *strongly* positive and *moderately* positive reaction (Figure 4.6). An additional 25% have a neutral reaction, and only 5% have a negative reaction.

**Q124. When I say, 'sustainable management,' do you have a positive, neutral, or negative reaction to the term?**



**Figure 4.6. Reactions to the Term, “Sustainable Management”**

Again, although reactions were mostly positive, it is worth looking at comments from those focus group participants with less favorable reactions. When focus group participants were asked for their reaction to the term, “sustainable management,” comments included the following:

“To me, that’s trying to play off the whole idea of sustainability. I don’t know what that means. It’s kind of a key word or a catchphrase, but it sounds kind of tricky. Sounds like a buzzword from a politician.” —New Hampshire participant

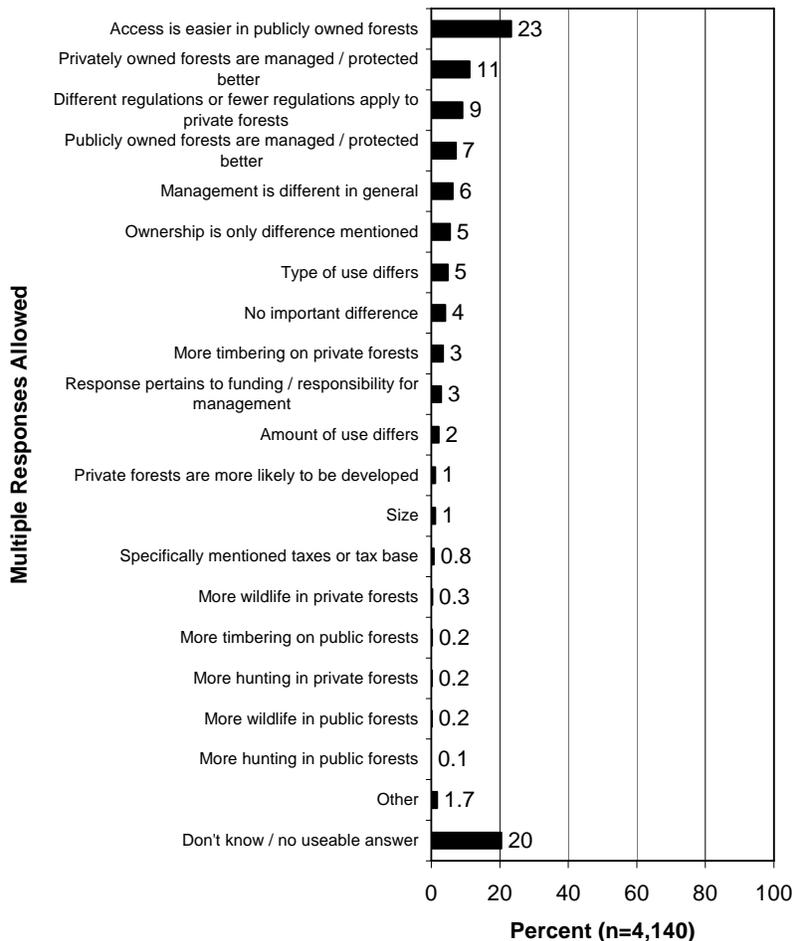
“I think ‘sustainable’ could stand by itself. When you throw in ‘management,’ it’s like one of those qualifiers.” —New Hampshire participant

“Sounds like something on an episode of *Law and Order*.” —New York participant

The survey also asked respondents to indicate what they think are the differences between the words “conserve” and “preserve.” This was an open-ended question that produced more than 3,000 different responses, and the answers were quite disparate. For this reason, a qualitative analysis was performed. First of all, it is important to note that the responses were quite varied, indicating no real consensus on the differences between the terms. Additionally, some respondents have opposite views of the terms (one thinks that conserve means to use but not use up, while preserve means no use at all; another thinks that preserve means to use but not use up, while conserve means no use at all). Many think that there are no important differences. One interesting interpretation is that preserve is what is done before a resource is in danger of being used up, while conserve is what is done after a resource becomes imperiled. Many answer that they do not know or cannot say. The bottom line is that there are widely different interpretations of the words and that those meanings do not always dovetail with the way the words are used in the conservation community and among land-use professionals. A typical comment from the Ohio focus group highlights this ambiguity: “‘Preserve’ and ‘conserve’ are about the same, right?”

Another question asked respondents to indicate how publicly owned forests differ from privately owned forests. This was an open-ended question with no prompts regarding what to say. Most commonly, respondents indicate that *access* is the primary difference (23% of respondents give an answer related to this) (Figure 4.7). Others mention that different regulations apply (often, but not exclusively, that people can do what they want with private land) (9% give one of these regulation-related answers), that management in general is different (6%), and that the types of land use differ (5%). Note that, unprompted, 11% simply say that privately owned forests are managed better, while 7% say that publicly owned forests are managed better.

**Q36. In your opinion, how do privately owned forests differ from publicly owned forests?**



**Figure 4.7. Perceived Differences Between Publicly Owned Forests and Privately Owned Forests**

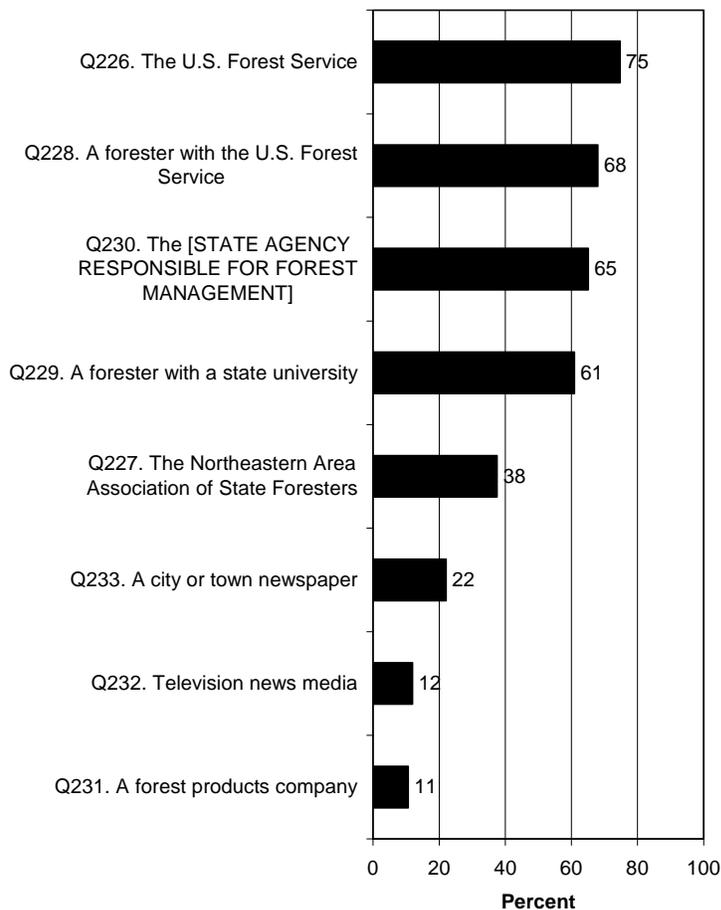
An Ohio focus group participant succinctly pointed out a nuance in the difference in the terms “privately owned” and “private”: “I like the term ‘privately owned,’ because ‘private’ means exclusive, in my mind. I think it [privately owned] is a neutral connotation.”

As previously discussed in Chapter 2, the survey explored tract size, and the findings have some implications regarding wording. It found that substantial percentages do not think of tree-covered land as being a “forest” until a certain size threshold has been reached, the median amount being 40 acres (see Figure 2.30 in Chapter 2). Furthermore, it found that only about a third of respondents (31%) would think of a tree-covered tract as small as 20 acres as being a

forest, while 40% would not (the latter thinking such a tract would be too small). For this reason, it is important to realize that “forest” may not encompass lands (in some people’s perceptions) that are considered forest by the NAASF.

Another set of questions that concerned reactions to terms and messages pertained to the entities that deliver those messages; the survey asked about eight potential sources. Figure 4.8 shows that four of the eight sources listed in the survey have a large majority saying each is *very* credible: the U.S. Forest Service (the highest rated, with 75% giving a rating of *very* credible), a forester with the U.S. Forest Service (68%), the state agency responsible for forest management—note that the survey inserted the actual name of the agency for the state in which the respondent lived (65%), and a forester with a state university (61%). Fortunately, government agencies can use this credibility to their advantage when it comes to communications. At the other end, quite low percentages think that a forest-products company (11%) or the television news media (12%) is *very* credible about forest issues and forest stewardship.

**Percent who indicated that the following are very credible as a source of information on forest issues and forest stewardship.**



**Figure 4.8. Percent Rating Various Sources of Information as Very Credible**

The focus groups also discussed reactions to various words. These findings are qualitatively important (the limitation on survey length did not allow all words and terms of interest to be tested quantitatively). For each of the words shown in bold, the quotations that follow provide a sampling of opinion about that word as it pertains to forests and forest stewardship.

### **Conservation**

“It’s pertinent, but I don’t know that I necessarily think of it in conjunction with private forests. I think more about public forests.” —New York participant

“It depends on the owner [of the private land].” —New York participant

“You need both preservation and conservation to balance things out. You can’t always preserve something that’s renewable. [Conservation and preservation] intertwine a little bit.” —Wisconsin participant

“‘Conservation’ is thrown around so much today; it’s lost some meaning.”  
—Ohio participant

### **Healthy**

“I think it’s too vague.” —Ohio participant

### **Improve**

“There’s too much gray area in these terms. ‘Health’? Keep the forest healthy? Keep us healthy? ‘Improve’? Improve what?” —Ohio participant

### **Investment**

“Now, that’s a good word. Purchasing land is an investment. You’re investing your money and land, which in turn could bring you more dollars.” —Ohio participant

“There’s also the philosophical definition of investing for your future, investing for mankind.” —Ohio participant

“If I buy 120 acres, I want a certain return. Whether it’s sanctuary to hunt and fish, or an opportunity to sell it, or farm it, or whatever.” —Ohio participant

“Any time I hear the word [investment], I get a little suspicious. I’m really not sure why. Someone’s out to make money, and I don’t want anyone making money off me.” —New Hampshire participant

“The connotation of investment is you’re spending some money to make a profit somehow. If you’re buying land as an investment, I think the implication is that you’re going to make a profit on it somehow.” —New Hampshire participant

“Depends on who they’re investing for. My granddaughter and her kids? Yes. Money? No.” —New York participant

“If it’s an investment, they’re taking care of it. That means they’re going to wait a couple of years before they turn it around. I guess it depends on the time and situation and individual. Investment shouldn’t be a dirty word. Maybe ‘profit’ is a dirtier word.” —New York participant

### **Manage**

“Aren’t ‘government’ and ‘manage’ the same things? What are we managing?” —Ohio participant

### **Mitigation**

“That’s a big word for people to understand. What are we mitigating? What circumstances? It’s somewhat out of context.” —Ohio participant

“That’s not a good word. It’s a word to trick somebody, like a legal term.” —New Hampshire participant

“I have no clue what it is.” —Wisconsin participant

“Mediate? To argue?” —Wisconsin participant

“Depends how you use that word. It really depends. I think you need to dumb it down a little bit.” —Wisconsin participant

### **Quality**

“If the program is going to make the quality of the land better, then that’s a good word.” —Ohio participant

### **Peaceful**

“There’s a good word. A simple one people understand that applies to private forests.” —Ohio participant

### **Preserve**

“‘Preserve’ means to set aside, off limits to everyone. It’s storing stuff in a jar.” —Wisconsin participant

**Productive**

“Seems vague.” —Ohio participant

“Could be good, like if you’re a deer hunter and land is productive.” —Ohio participant

“Good connotation to me.” —New Hampshire participant

“Something that’s producing. Not just a financial gain but productive in conservation maybe.” —New Hampshire participant

“It means everything is going the way it’s supposed to: just the right amount of plants, deer, everything.” —New Hampshire participant

“I personally don’t relate that to private forests, no. I guess they could be productive, but...I don’t know. It’s not what I think of.” —New York participant

“I think more about relaxing than producing as far as forests are concerned.” —New York participant

“If you’re talking about a productive forest that hasn’t died out, it’s sustaining itself. It’s a productive forest.” —Wisconsin participant

“It’s like a forest that has potential. It’s going in the right direction.” —Wisconsin participant

**Protect**

“Yeah, that’s a good word.” —Ohio participant

“Well, again: are you protecting the land and not letting anyone on it? There needs to be another word. There needs to be an additional word.” —Ohio participant

**Stewardship**

“That’s positive. That means that someone’s looking over the land.” —Ohio participant

## CHAPTER 5. TARGET AUDIENCES

There are several specific aspects of target audiences that this study explored. Various target markets can be defined by demographic factors, by opinions and attitudes on various issues, and by the sources and ways that people obtain information about forests and forest-related issues.

### EXAMINATION OF DEMOGRAPHIC FACTORS IN THE GENERAL POPULATION SURVEY DATA

The most basic target markets are defined by demographic factors, such as gender, education, age, and so forth. A very useful tool in examining these target markets is the nonparametric analysis that was conducted as part of this study. Important findings are presented below.

#### Analysis of Gender in the Nonparametric Analysis

One of the nonparametric analysis variables was gender. It found that men are more likely than are women to have visited a forested area in the 2 years previous to the survey ( $p \leq 0.001$ ), although majorities of both had visited a forested area.

Women are more likely, compared to men, to *not* describe forest lands in their state as healthy (i.e., they more often answer “neither healthy nor unhealthy,” “somewhat unhealthy,” “very unhealthy,” or “don’t know”) ( $p \leq 0.01$ ).

Women are more likely, relative to men, to give a higher rating to the importance of privately owned forests for providing clean air ( $p \leq 0.001$ ) and clean water ( $p \leq 0.001$ ). However, despite recognizing the importance of privately owned forests for these basic necessities, women are *less* likely than men to have a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ).

#### Analysis of Age in the Nonparametric Analysis

For this analysis, three age categories were used: under 35 years old, 35 to 54 years old, and 55 years old and older. In testing these variables for correlations to opinions, the analysis looks at people in the group versus those *not* in that group. For example, the analysis would look at those “under 35 years old” compared to those in either of the other two categories. This is straightforward in this example (i.e., the other groups together can be defined as 35 years old or older). However, for the next age group, “35 to 54 years old,” the analysis compares them to a group made up of “under 25 years old” and “55 years old and older” together.

This nonparametric analysis of the age variable found that the middle age group is the most likely to have visited a forested area in the past 2 years ( $p \leq 0.05$ ) (although note that most people in any of the age groups have visited a forested area). Meanwhile, the oldest age group is the *least* likely to have visited a forested area ( $p \leq 0.001$ ). This latter finding is interesting in that the oldest age group is the *most* likely of the three groups to indicate that they own land that is or could be forest land ( $p \leq 0.01$ ), although a minority of any of the age groups have such land.

The oldest age group is the most likely of the three groups to *not* describe forest lands in their state as healthy (i.e., the most likely to say that forests are unhealthy or to give a neutral answer)

( $p \leq 0.01$ ). On the other hand, the youngest age group is the most likely to rate the forests as *somewhat* healthy ( $p \leq 0.01$ ). No age group is correlated to answering *very* healthy.

The oldest age group is the most likely of the three age groups to give high ratings to the importance of privately owned forests for providing clean water ( $p \leq 0.001$ ). They are also the age group most likely to give a high rating of the importance of privately owned forests to the overall health and quality of all forests in their state ( $p \leq 0.05$ ). For both of these variables, the youngest age group is the most likely to give a low rating.

Finally regarding the nonparametric analysis of the age variable, the oldest age group is the most likely to have a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ), while the youngest age group is the most likely of the three groups to *not* have a positive reaction (neutral, negative, or don’t know) ( $p \leq 0.01$ ).

### **Analysis of Level of Education in the Nonparametric Analysis**

The education variable had three levels in the analysis: no higher than a high school diploma, some college but no bachelor’s degree, and a bachelor’s degree or higher.

Those most likely to have visited a forested area, of these three educational strata, are those who have at least a bachelor’s degree ( $p \leq 0.001$ ). At the other end, the least likely to have visited a forested area are those who have no more than a high school diploma ( $p \leq 0.001$ ).

The lowest educational group is the most likely to *not* give a rating of healthy to the forests in their state ( $p \leq 0.05$ ).

Finally regarding education, the highest educational group is more likely than the other two groups to have a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ).

### **Analysis of Type of Residential Area in the Nonparametric Analysis**

The survey had asked respondents about the type of residential area in which they lived, using a scale that went from large city/urban area to rural. There were four basic selections: “large city or urban area,” “suburban area,” “small city or town,” and “rural area.” For the nonparametric analysis, two groupings of respondents were made: “large city or urban area” and “suburban area” were combined into the first group, and “small city or town” and “rural area” were combined into the second group. These will be referred to as the “predominantly urban” and “predominantly rural” groupings.

Regarding visitation, it is perhaps no surprise that those who live in the predominantly rural grouping are more likely than their counterparts to have visited a forested area ( $p \leq 0.001$ ).

The predominantly rural group is more likely than the predominantly urban group to rate the forests in their state as *very healthy* ( $p \leq 0.001$ ).

Finally, the predominantly rural group is more likely, compared to the predominantly urban group, to give a high rating to the importance of privately owned forests for providing clean water ( $p \leq 0.001$ ) and for providing clean air ( $p \leq 0.001$ ). Additionally, the predominantly rural group is more likely than the predominantly urban group to give a high rating to the importance of privately owned forests to the overall health and quality of forests in their state ( $p \leq 0.001$ ).

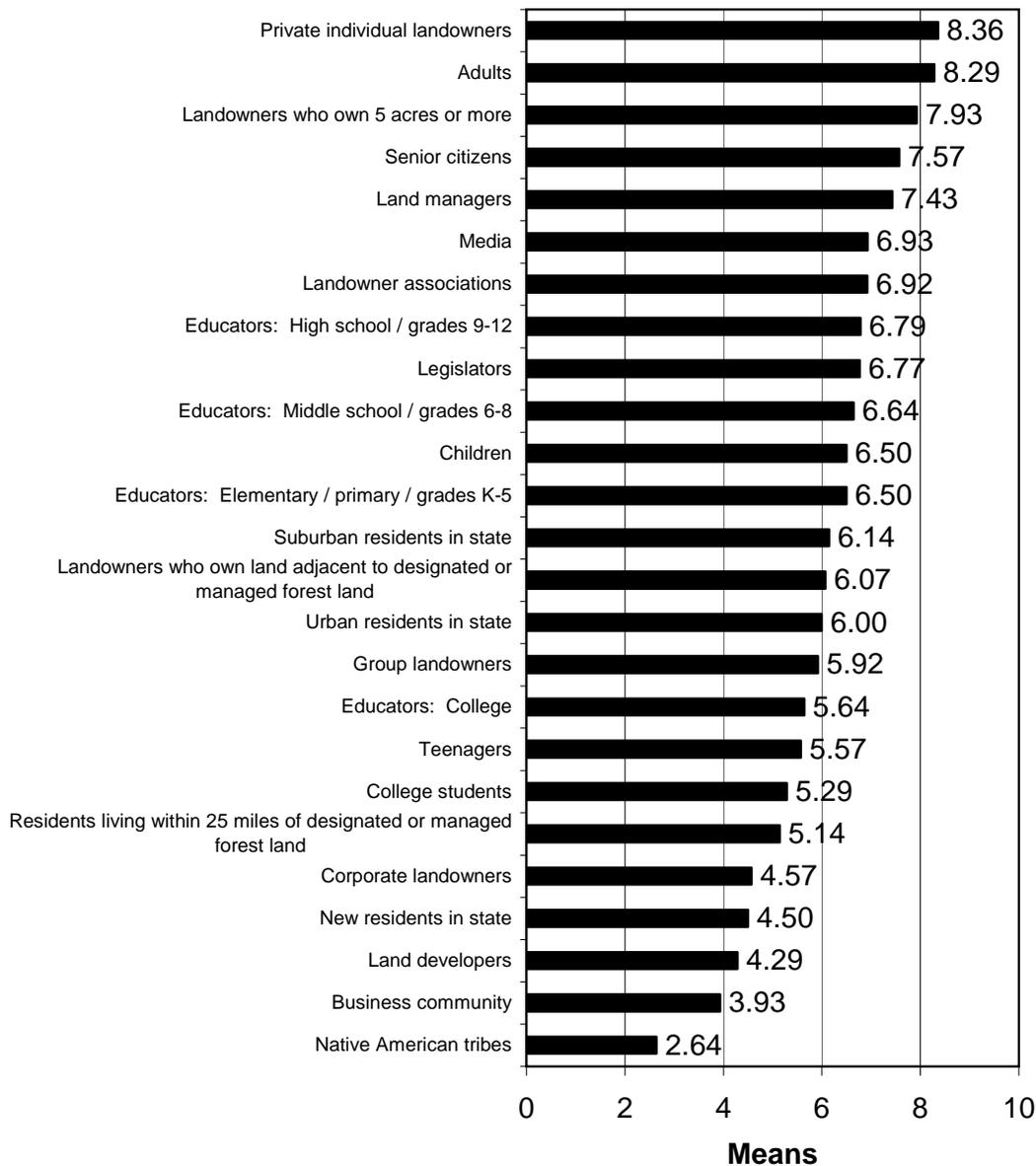
### **Focus Group Findings Regarding Targeting Landowners With Communications**

A basic demographic factor is simple ownership of land. In thinking about newer, inexperienced landowners, note that this group includes people who may have recently purchased forest property or similar land but who do not necessarily have a background in land management and upkeep. The focus group findings suggest that these are individuals likely to accept stewardship advice and assistance from the Forest Stewardship Project, and they are likely to benefit from project resources and may be easily won over by the project objectives. On the other hand, older, longtime landowners are the opposite of the group described above in many respects. The focus group findings suggest that the outreach approach used for this audience could frame the health and sustainability of private forests as a family legacy issue (i.e., a way of preserving and maintaining the current state of a private forest in order to allow future generations to experience and enjoy it); otherwise, longtime landowners in the focus groups tended to think that they did not need advice.

### **FINDINGS REGARDING DEMOGRAPHICALLY DEFINED TARGET MARKETS FROM THE SURVEY OF PROFESSIONAL FORESTERS AND COMMITTEE MEMBERS**

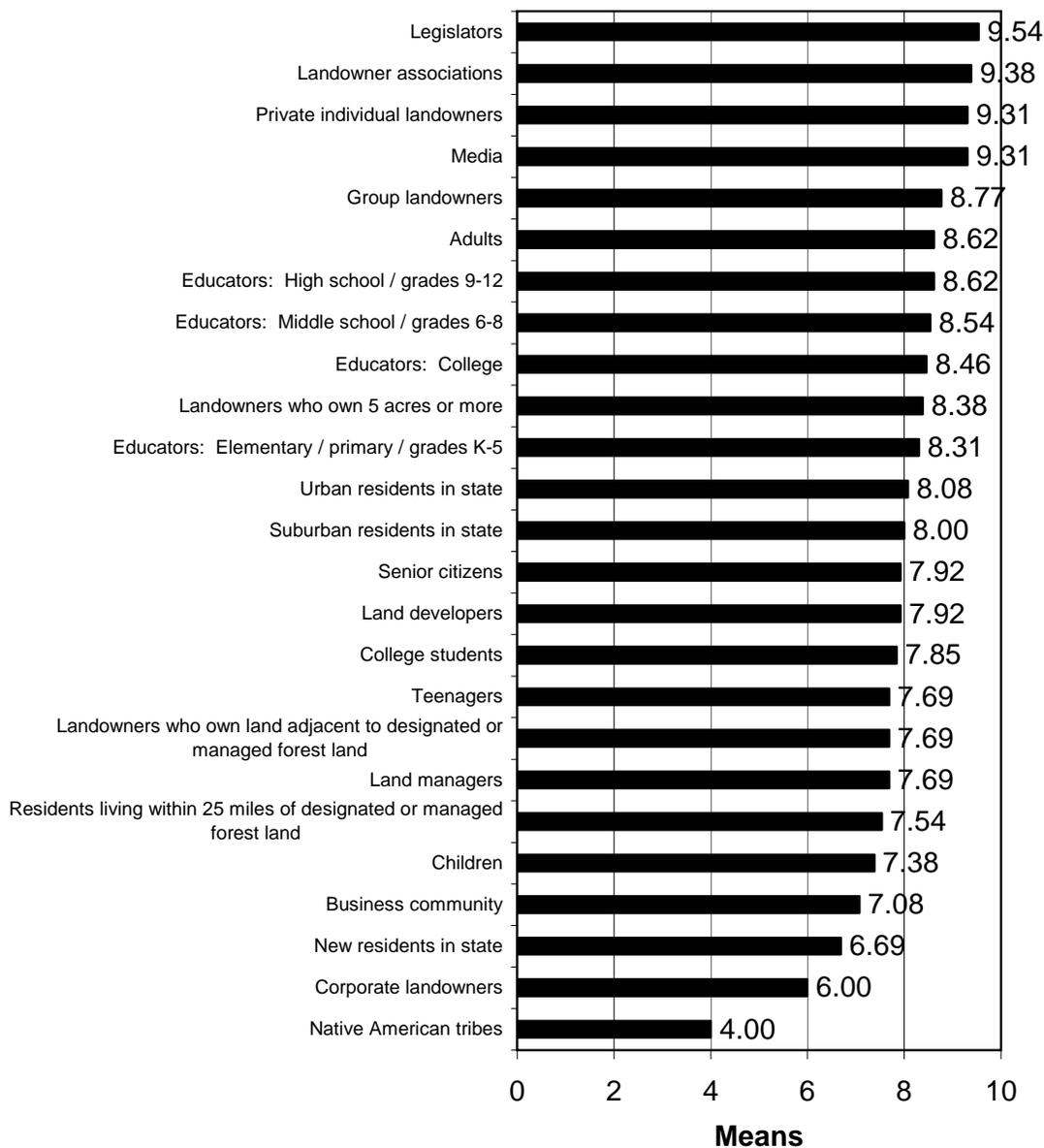
The survey of State Foresters asked respondents to rate how much their agency currently prioritizes outreach to various groups, using a 0 to 10 scale where “0” is not a priority at all and “10” is an extremely high priority (Figure 5.1). At the top are private individual landowners (mean rating of 8.36), adults (8.29), landowners who own 5 acres or more (7.93), senior citizens (7.57), and land managers (7.43). The survey then asked them to rate how much of a priority each group *should be* for their agency (Figure 5.2). At the top are legislators (mean rating of 9.54), landowners associations (9.38), private individual landowners (9.31), the media (also 9.31), and group landowners (8.77). A comparison shows where differences occur between current agency efforts and where State Foresters think their agency should be (Figure 5.3).

**On a scale of 0 to 10, where 0 is not a priority at all and 10 is an extremely high priority, the mean rating the following groups and audiences currently are for their agency / organization's education, outreach, and communication materials on private forest stewardship. (State Foresters.)**



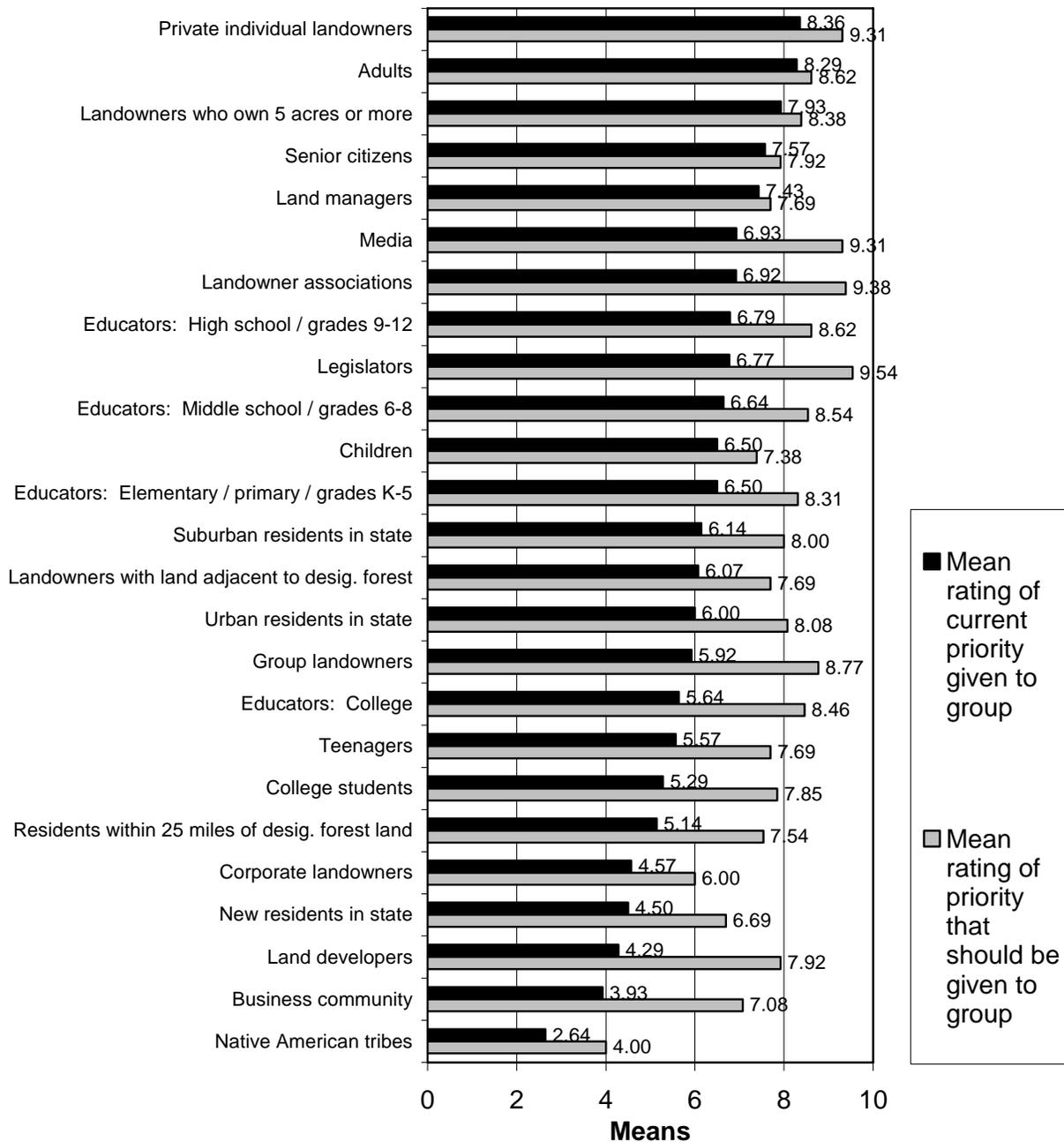
**Figure 5.1. Mean Ratings of Current Priority Given to Outreach to Various Groups**

**On a scale of 0 to 10, where 0 is not a priority at all and 10 is an extremely high priority, the mean rating the following groups and audiences should be for their agency / organization to target for education, outreach, and communication materials on private forest stewardship. (State Foresters.)**



**Figure 5.2. Mean Ratings of Priority That Foresters Think Should Be Given to Outreach to Various Groups**

**On a scale of 0 to 10, where 0 is not a priority at all and 10 is an extremely high priority, the mean rating the following groups and audiences should be for their agency / organization to target for education, outreach, and communication materials on private forest stewardship. (State Foresters.)**



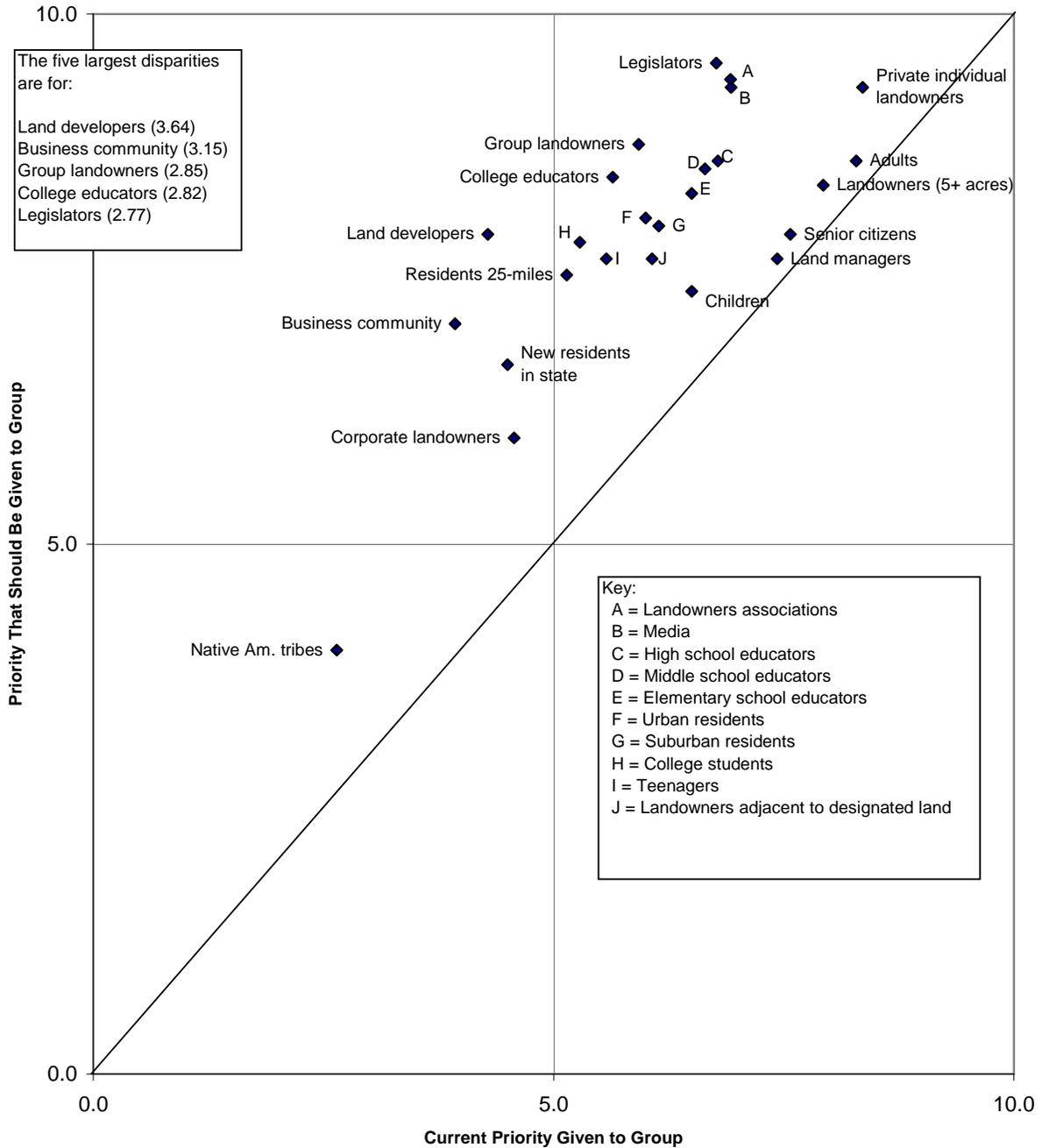
**Figure 5.3. Comparison of Mean Ratings of Current Priority and Mean Ratings of Desired Priority Given to Outreach to Various Groups**

The comparison in Figure 5.3 above shows that the priority that State Foresters think should be given each group is higher than the priority actually given to that group. This is somewhat to be expected, as most people wish they could do more than they actually can. However, some groups' priorities currently given them are well below the priority that Foresters think they should be given.

A different way to compare the current priorities and Foresters' desired priorities is in a scatterplot (Figure 5.4). The x-axis shows the current priority given to the groups, and the y-axis shows the priorities that State Foresters think should be given to the groups. This type of graph can show when a low rating of current priority is commensurate with the rating that should be given to it or when a low rating of current priority is for something that should be given a high priority. The diagonal line shows where current priority equals the desired priority. No items fell below/to the right of the diagonal line, which indicates that for no groups is the current priority higher than the desired priority. The area above/to the left of the diagonal line shows where the current priority is lower than the desired priority, which encompasses all of the groups in the survey.

An item's distance from the line shows how close or far apart the current and desired priorities are. Items close to the line have current priorities that are commensurate with their desired priorities. On the other hand, items far from the line have current priorities that are markedly lower than their desired priorities, and this includes five groups in particular: land developers (which has a "should be" rating that is 3.64 points more than its actual rating), the business community (difference of 3.15), group landowners (2.85), college educators (2.82), and legislators (2.77). For each of these groups, State Foresters as a whole think more priority should be given than is actually given.

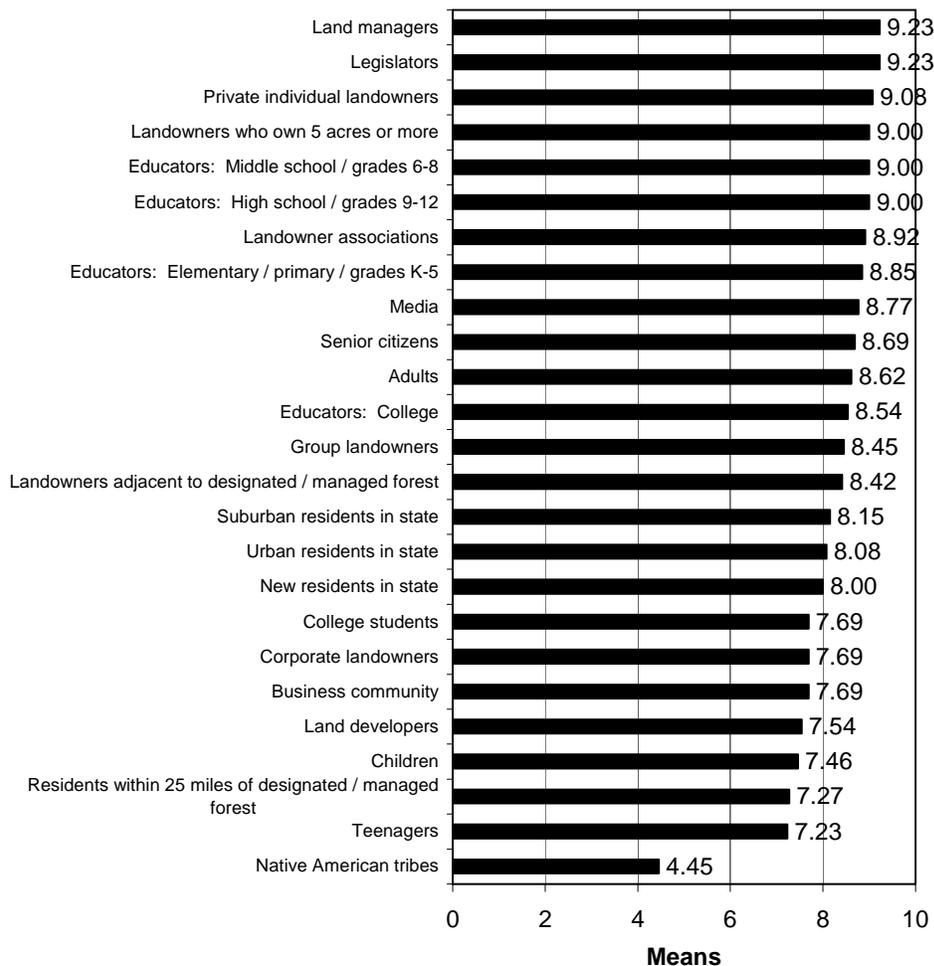
### Comparison of ratings of importance and performance of programs/efforts. (Graph is correctly scaled.)



**Figure 5.4. Scatterplot Comparison of Mean Ratings of Current Priority and Mean Ratings of Desired Priority Given to Outreach to Various Groups**

The Committee Members’ ranking of current priorities was quite similar to the State Foresters’ ranking, both groups sharing 9 of the top 10 places in the rankings of the target markets currently prioritized. However, they differed somewhat in the rankings of the groups that they think *should be* prioritized. As shown in Figure 5.5, land managers are at the top of the Committee Members’ ranking, much higher ranked among them than among State Foresters (see Figure 5.2). In particular, land managers as a group is at the top of the Committee Members’ ranking, but this group is much further down in the State Foresters’ ranking in Figure 5.2.

**On a scale of 0 to 10, where 0 is not a priority at all and 10 is an extremely high priority, the mean rating the following groups and audiences should be for their agency / organization to target for education, outreach, and communication materials on private forest stewardship. (Committee Members.)**



**Figure 5.5. Mean Ratings of Priority That Foresters Think Should Be Given to Outreach to Various Groups**

## GENERAL POPULATION SURVEY RESULTS: OPINIONS AND ATTITUDES TOWARD FORESTS AS DEFINING TARGET MARKETS

Several questions in the survey can serve as defining variables for target markets, and these were examined in the nonparametric analysis. A most basic one is visitation to a forested area. It is also important to note that this measures perceptions, as there was no definition of “forested area” in the survey (by design), and two people could have opposite opinions of the same area.

### Analysis of Visitation to a Forested Area in the Nonparametric Analysis

As previously discussed, 81% of respondents have visited a forested area, while 19% have not. These define two target markets, with the latter being, obviously, a harder market to penetrate with pro-forest stewardship messages because of its disconnectedness to forest issues.

The nonparametric analysis explored the visitation variable. Visitation to a forested area is correlated with several demographic variables. Primary among them are that men are more likely than women to have visited a forested area in the 2 years previous to the survey ( $p \leq 0.001$ ), and those in the younger age bracket (under 35 years) and the middle age bracket (35 to 54) are more likely than the older age bracket (55 and over) to have visited a forested area in the previous 2 years ( $p \leq 0.05$ ). The nonparametric analysis also found that respondents in the higher education bracket (a bachelor’s degree or higher) are more likely than those in the other education brackets to have visited a forested area ( $p \leq 0.001$ ). However, these are broad characteristics with many exceptions. The correlations simply reflect the population when examined as a whole.

Opinions on forest-related issues have correlations to visitation to forested areas, although cause and effect cannot be determined from the survey; likely each affects the other. Regardless, those who have visited a forested area are more likely, compared to those who have not visited a forested area, to describe forests in their state as healthy ( $p \leq 0.001$ ). Also, those who have visited a forested area are more likely, compared to those who have not visited a forested area, to give a high rating to the importance of privately owned forests to the overall health and quality of forests in their state ( $p \leq 0.001$ ) and to have a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ).

### Analysis of Perceptions of Forest Health in the Nonparametric Analysis

As previously discussed, 37% of respondents perceive the forests of their state to be *very* healthy, and another 43% describe them as *somewhat* healthy, leaving 20% who do *not* describe the forests in their state as healthy (8% saying unhealthy and 12% being neutral). The nonparametric analysis used these three breakdowns of this variable: those who say *very* healthy, those who say *somewhat* healthy, and those who did *not* say healthy (they said “neither healthy nor unhealthy,” “somewhat unhealthy,” “very unhealthy,” or “don’t know”).

Those who generally describe the forest lands in their state as *very* healthy, compared to the other two groups, are more likely to reside in New Hampshire ( $p \leq 0.001$ ), Maine ( $p \leq 0.001$ ), Minnesota ( $p \leq 0.001$ ), Wisconsin ( $p \leq 0.001$ ), or Vermont ( $p \leq 0.001$ ). They are also more likely to be in the predominantly rural demographic bracket ( $p \leq 0.001$ ) (for the analysis, this variable was divided into predominantly rural, consisting of “small city or town” and “rural

area,” and predominantly urban, consisting of “large city or urban area” and “suburban area”). Finally, those who generally describe the forest lands in their state as *very* healthy are more likely than their counterparts to have a positive reaction to the term, “sustainable management” ( $p \leq 0.05$ ).

This analysis included the middle grouping—those who rate their state’s forests as *somewhat* healthy—but of more interest is the converse of the above paragraph: an examination of those who do *not* say healthy regarding their state’s forests (they say “neither healthy nor unhealthy,” “somewhat unhealthy,” “very unhealthy,” or “don’t know”). This group is likely to have a higher proportion of women than are the other two groups (those who say their state’s forests are *very* healthy and those who say *somewhat* healthy) ( $p \leq 0.001$ ), and this group is more likely to have a higher proportion of the older age bracket ( $p \leq 0.01$ ) (55 years and older was used in the analysis). Likewise, those who do not say that their state’s forests are healthy are more likely than are their counterparts to reside in Delaware ( $p \leq 0.001$ ), New Jersey ( $p \leq 0.01$ ), New York ( $p \leq 0.05$ ), Maryland ( $p \leq 0.05$ ), or Illinois ( $p \leq 0.05$ ). Those who do not say that their state’s forests are healthy are more likely than their counterparts to be in the predominantly urban demographic bracket ( $p \leq 0.001$ ), and they are more likely to be in the lower educational bracket ( $p \leq 0.05$ ). Additionally, those in the “not healthy” group are more likely than their counterparts to have not visited a forested area ( $p \leq 0.001$ ). Finally, there is a correlation to *not* rating their state’s forests as healthy and *not* having a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ).

### **Analysis of Ratings of the Importance of Privately Owned Forests in the Nonparametric Analysis**

One of the variables examined in the nonparametric analysis was based on the question that asked respondents to rate the importance of privately owned forests to the overall health and quality of forests in their state. Two groupings were made: those who give a rating of “8” or higher (59% of respondents), and those who give a rating of “7” or lower (36% of respondents) (the “don’t know” responses were ignored in this analysis). The analysis first looks at those who give a high rating.

Those who give a high rating are more likely than those who give a low rating be in the older age bracket of 55 years old and older ( $p \leq 0.05$ ). Those in the high rating group are more likely than those in the low rating group to be predominantly rural ( $p \leq 0.001$ ). There were correlations to two states: those who give a high rating of importance are more likely to be from Missouri ( $p \leq 0.05$ ) or Vermont ( $p \leq 0.05$ ) than are those who give a low rating. Those who give a high rating to the importance of privately owned forests to the overall health and quality of forests in their state are more likely than are those who give a low rating to have visited a forested area in the previous 2 years ( $p \leq 0.01$ ). Finally, those who give a high rating are more likely to have a positive reaction to the term, “sustainable management,” than are those who give a low rating ( $p \leq 0.001$ ).

The analysis now looks at the latter of the two groups defined by this variable—those who give a low relative rating. Those who give a low rating to the importance of privately owned forests to the overall health and quality of forests in their state are more likely to be in the younger age

bracket (under 35 years) than are those who give a high rating ( $p \leq 0.01$ ). Those in the low rating group are more likely to be predominantly urban than are those in the high rating group ( $p \leq 0.001$ ). Three states are correlated with a low rating, meaning those who give a low rating are more likely to be from any of these states than are those who give a high rating: Massachusetts ( $p \leq 0.01$ ), Pennsylvania ( $p \leq 0.01$ ), and New Jersey ( $p \leq 0.05$ ). Additionally, those who give a low rating to the importance of privately owned forests to the overall health and quality of forests in their state are more likely to have *not* visited a forested area, compared to those who give a high rating ( $p \leq 0.001$ ). A final important finding is that those in the low rating group are more likely to *not* have a positive reaction to the term, “sustainable management” ( $p \leq 0.001$ ) (i.e., they are more likely to have a neutral or negative reaction to the term or not know the term).

### **Analysis of Reaction to the Term, “Sustainable Management” in the Nonparametric Analysis**

In the nonparametric analysis of this variable, two categories were made: those who have a positive reaction to the term, “sustainable management,” and those who do not (i.e., they have a neutral or negative reaction or say “don’t know”). As reported earlier, 66% of respondents have a positive reaction, leaving 34% of respondents who do not have a positive reaction.

In the first analysis, those who have a positive reaction to the term are more likely than those who do not to be men ( $p \leq 0.001$ ), as well as to be in the older age bracket ( $p \leq 0.001$ ) and/or to have a level of education of a bachelor’s degree or higher ( $p \leq 0.001$ ). Additionally, those who have a positive reaction, compared to those who do not have a positive reaction, are more likely to have visited a forested area in the previous 2 years ( $p \leq 0.001$ ). Also, they are more likely, compared to those not having a positive reaction, to generally describe forests in their state as *very* healthy ( $p \leq 0.05$ ). Finally, those who have a positive reaction are more likely than are those who do not have a positive reaction to give a high rating to the importance of privately owned forests for the overall health and quality of forests in their state ( $p \leq 0.001$ ), as well as to give a high rating to the importance of privately owned forests for providing clean water ( $p \leq 0.001$ ) and clean air ( $p \leq 0.001$ ).

Conversely, those who do not have a positive reaction (remember that it includes negative and neutral reactions and responses of “don’t know”) were found to have some correlations in the nonparametric analysis. Those who do not have a positive reaction to the term are more likely than those who do to be women ( $p \leq 0.001$ ), as well as to be in the younger age bracket ( $p \leq 0.01$ ) and/or to have a level of education in either of the two brackets below a bachelor’s degree ( $p \leq 0.001$ ). Those who do not have a positive reaction, compared to those who do, are more likely to *not* have visited a forested area in the previous 2 years ( $p \leq 0.001$ ). Also, those who do *not* have a positive reaction are more likely to *not* rate forests in their state as healthy than are those who have a positive reaction ( $p \leq 0.001$ ). Finally, they were associated with low ratings to the importance of privately owned forests for the overall health and quality of forests in their state ( $p \leq 0.001$ ), as well as low ratings to the importance of privately owned forests for providing clean water ( $p \leq 0.001$ ) and clean air ( $p \leq 0.001$ ).

## **Government Skepticism**

While this issue was not explored quantitatively in the nonparametric analysis of the general population survey data, a qualitative discussion is, nonetheless, pertinent here. The group of government skeptics may be the hardest group with which to communicate but also one of the important ones that cannot be ignored, particularly given the current prevalence of this mindset (e.g., people who oppose any government program on principle as a waste of tax dollars and/or an instance of “Big Government” mandating obligations and forcing people to do things or comply with certain rules). The focus group findings suggest that the key to communicating to this group is to consider that, while these people oppose government intervention, many of them also support natural resource conservation and effective forest management. Furthermore, they tend to trust a local government more than a state or the federal government. Another key is to communicate that the Forest Stewardship Project is not a government intrusion and does not strip landowners of their rights.

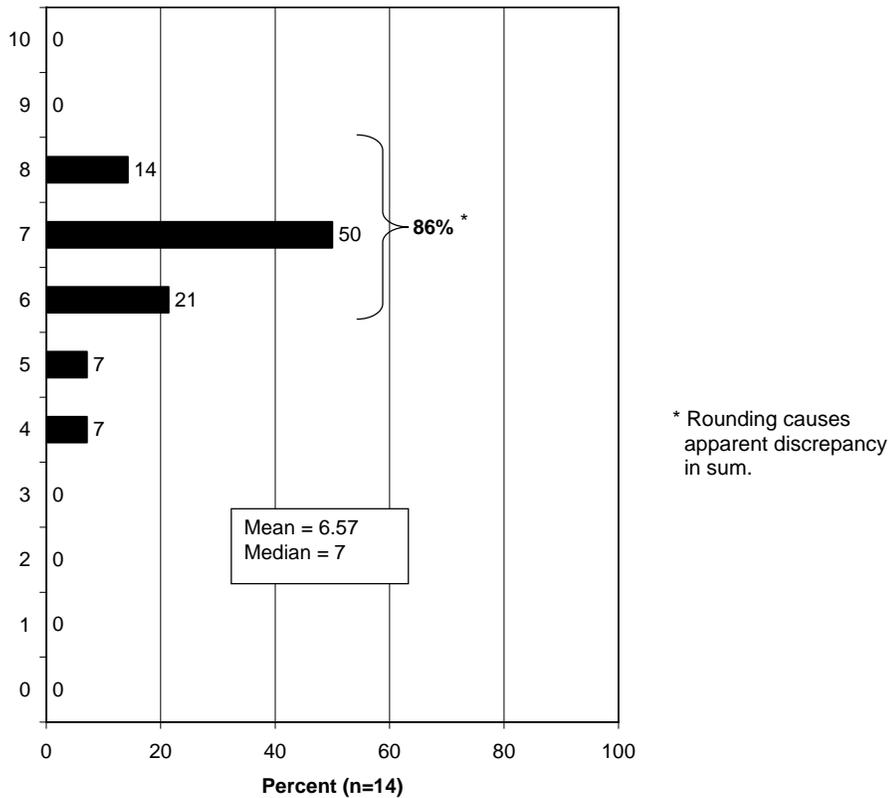
## **SOURCES OF INFORMATION AND WAYS TO OBTAIN INFORMATION**

As was shown earlier in Figure 3.4, government agencies together make up the top source of information on forest-related issues, with 36% of respondents obtaining data from them. Subsets of that 36% include state agencies (21% of respondents obtain forest-related information from them) federal agencies (13%), and unspecified government agencies (9%)—they sum to more than 36% because both state and federal agencies can be selected in the response. Additionally, 24% obtain information from television, 23% from newspapers, 15% obtain forest-related information from not-for profit organizations, and 9% from for-profit magazine publishers (more than this use magazines, but those other magazines are published by not-for-profit organizations or government agencies). Business/industry as a source of forest-related information is used by only 2% of respondents. Each of these constituencies defined by their source of information can be considered a target market.

Crosstabulations of the sources of information by demographic characteristics found almost no marked differences, with one exception. People with a higher education are the most likely to say that they use government sources for information about forests and forest-related issues. In the crosstabulation, 23% of those at an education level of no more than a high school diploma, compared to 36% of those with some college experience but no bachelor’s degree and 40% of those with at least a bachelor’s degree, get information from a government agency.

The survey of State Foresters has some applicability here. As noted above, government agencies together make up residents’ most common source of information on forest-related issues. Fortunately, State Foresters in general give positive ratings to the quality of information that they provide about stewardship of privately owned forests. As shown in Figure 5.6, an overwhelming majority of State Foresters in the Northeastern Area (86%) rate the quality of the information they provide higher than the midpoint. However, note that no State Foresters rated the quality of the information at a “9” or “10,” suggesting that there is room for improvement.

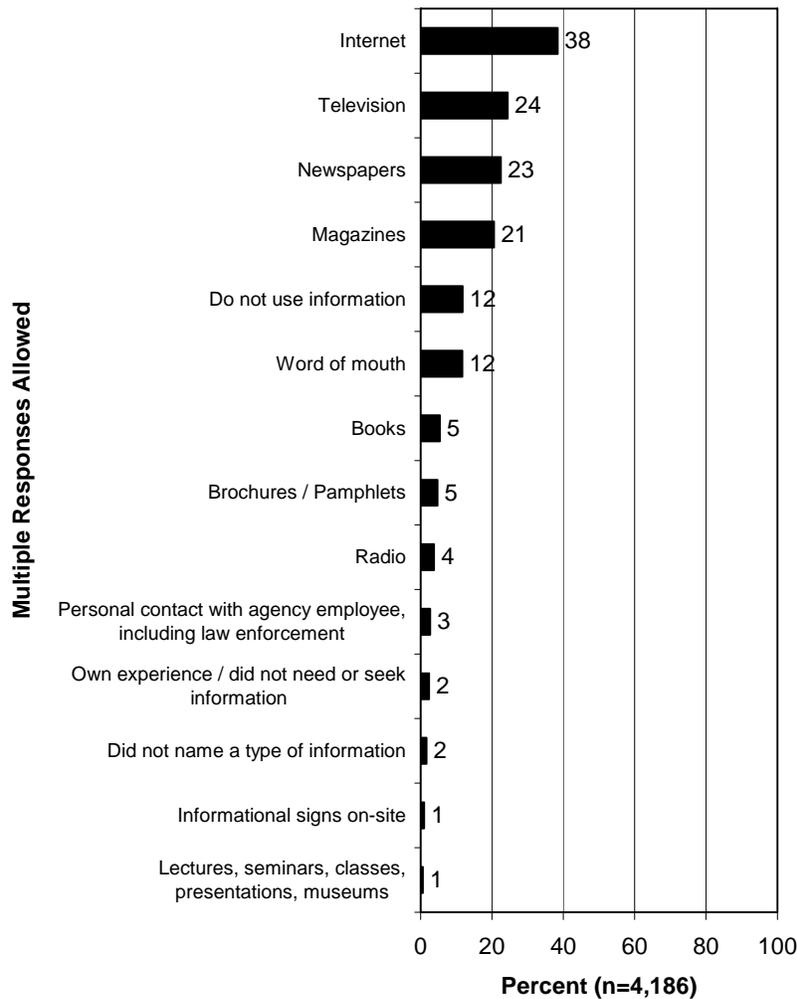
**On a scale of 0 to 10, where 0 is poor and 10 is excellent, how would you rate the overall quality of information on private forest stewardship that your agency / organization provides to the public in its education, outreach, and communication materials and programs?  
(State Foresters.)**



**Figure 5.6. State Foresters' Rating of the Quality of the Information on Stewardship of Privately Owned Forests Provided by Their Agency**

The survey of Northeastern Area residents also explored the *types* of information (i.e., the physical presentation of the information) used by residents. Figure 5.7 shows that the Internet is the top type of information source (38% obtain information online), closely followed by three other types of source: television (24%), newspapers (23%), and magazines (21%) (as noted above, some of these magazines are published by for-profit publishers, some by government agencies, and some by not-for-profit organizations). The full listing is presented in Figure 5.7.

**Q216. What types of information sources do you use about forest-related issues?**

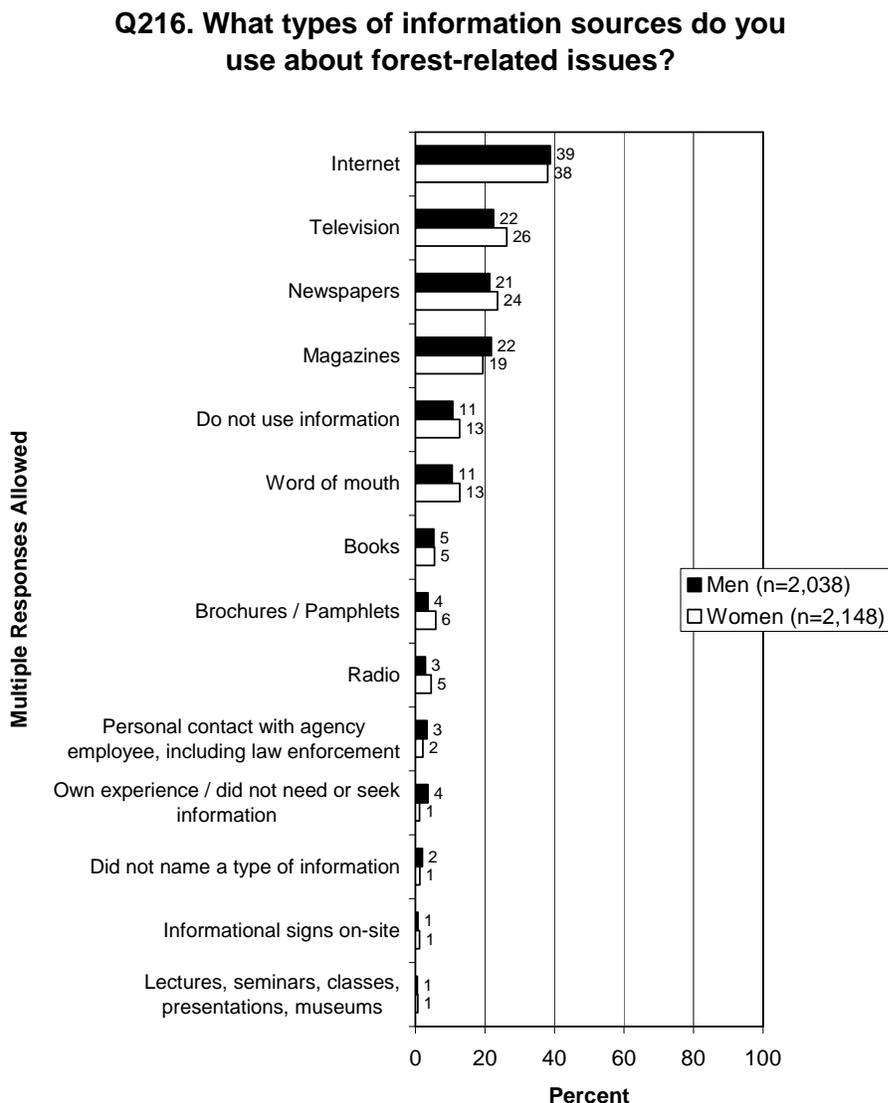


**Figure 5.7. Types of Information Sources That Respondents Use Regarding Forest-Related Issues**

Some crosstabulations that were previously discussed have applicability to this section. Previously, Q79, which asked respondents to rate how important forest stewardship should be for landowners, was crosstabulated by three sources of information. The only marked difference in opinion on the importance of forest stewardship for private landowners was in the crosstabulation by not-for-profit organizations: those who get information from not-for-profit organizations are more likely than are those who do *not* get information from not-for-profits to give higher ratings to the importance that stewardship of privately owned forests should be (see

Figure 3.7 in Chapter 3). The other two crosstabulations that were run found no marked differences: the crosstabulation by government agency versus *not* getting information from government agencies (see Figure 3.5), and obtaining data from television versus *not* getting information from television (see Figure 3.6).

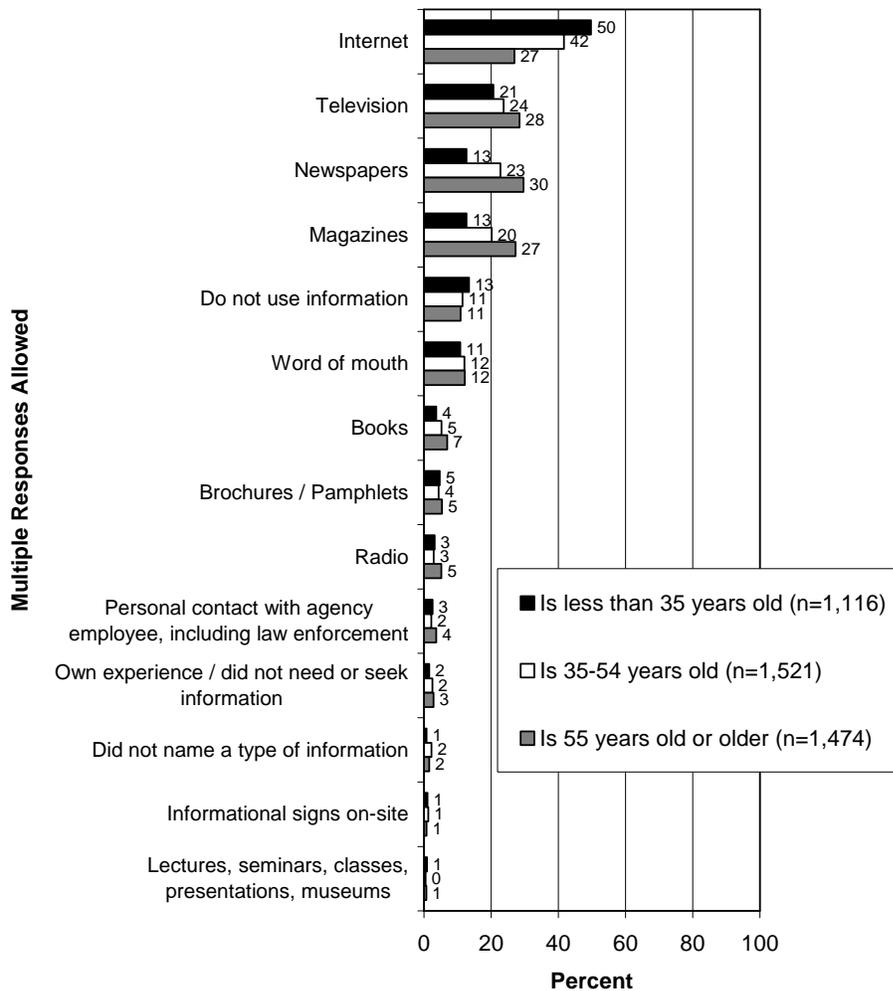
In addition to the crosstabulations of the opinion data by sources of information discussed immediately above, crosstabulations were run of sources of data by demographic variables. This helps tell who is using what to find information. In the first crosstabulation, there was little difference between men and women regarding their sources of information about forest issues (Figure 5.8).



**Figure 5.8. Types of Information Sources That Respondents Use Regarding Forest-Related Issues Crosstabulated by Gender**

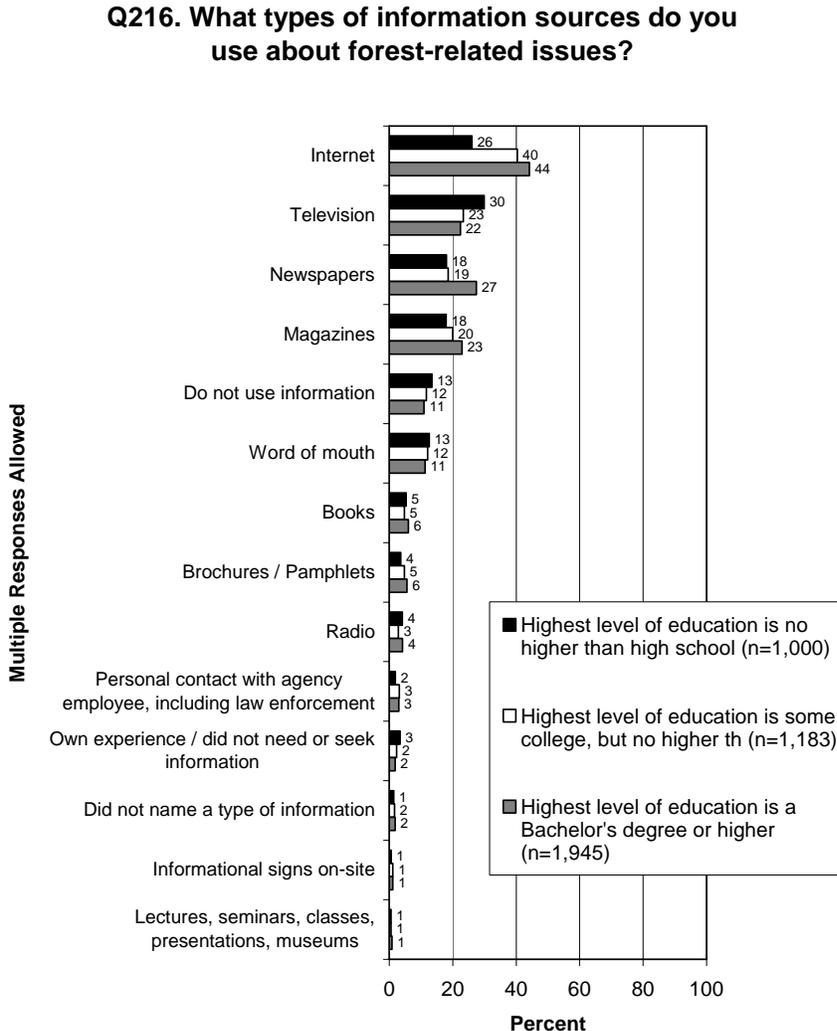
The crosstabulation of sources of information by age found some differences. Younger people have a higher rate of use of the Internet ( $p \leq 0.001$ ) than do older people, as shown in Figure 5.9, and they have a lower rate of use of print media ( $p \leq 0.001$ ).

**Q216. What types of information sources do you use about forest-related issues?**



**Figure 5.9. Types of Information Sources That Respondents Use Regarding Forest-Related Issues Crosstabulated by Age**

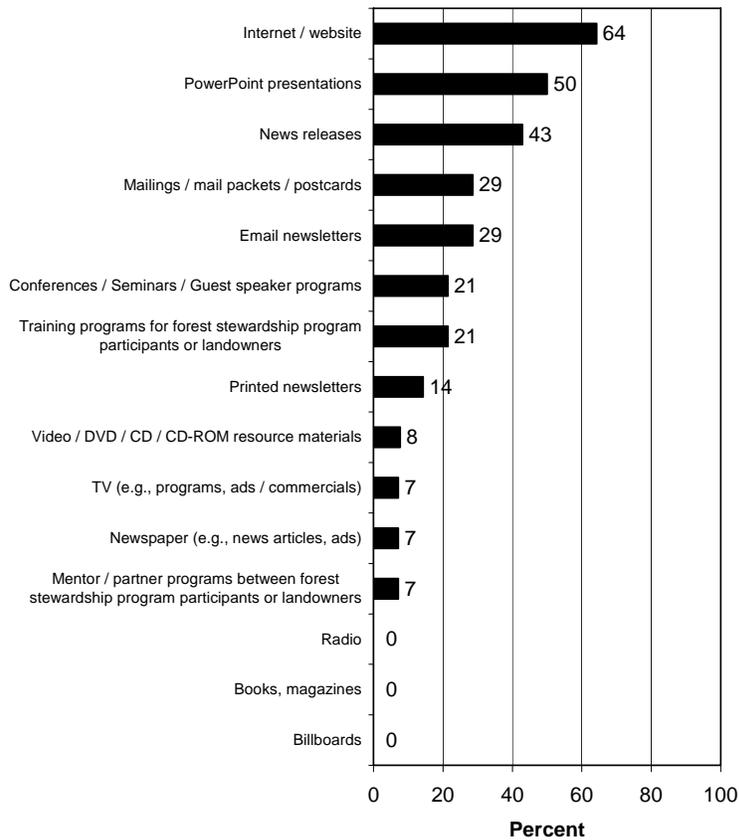
The same question crosstabulated by level of education found some important differences in sources of information. The Internet was used at a higher rate among the more educated (Figure 5.10) ( $p \leq 0.001$ ). Newspapers were also more used by those in the higher education bracket ( $p \leq 0.001$ ).



**Figure 5.10. Types of Information Sources That Respondents Use Regarding Forest-Related Issues Crosstabulated by Level of Education**

The survey of State Foresters asked them to indicate how much they use various types (i.e., formats) of education, outreach, and communications media. Fortunately, their top medium is the same as the top medium used by the general public: the Internet, which 64% of State Foresters say their agency uses *frequently* (Figure 5.11). State Foresters also indicate robust use of news releases, with 43% saying that they use them *frequently*, which coincides with robust use of newspapers and magazines among the general public (assuming that the news releases become the basis for news articles). The high rate of use of PowerPoint Presentations, unless they are intended for online viewing, may not be commensurate with the public's use of that medium: only 1% of the general public gets information from "lectures, seminars, classes, presentations, or museums" in which PowerPoint Presentations are typically used.

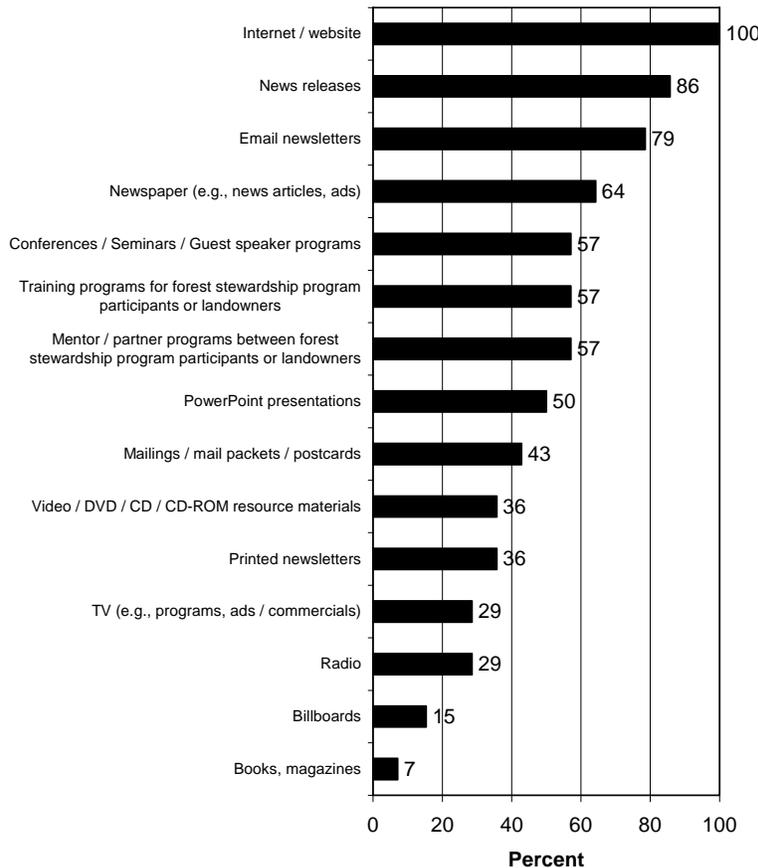
**Percent who indicated that they or people in their organization currently use the following formats for education, outreach, and communication to the public on private forest stewardship frequently. (State Foresters.)**



**Figure 5.11. Formats of Media Currently Used Frequently by State Foresters’ Agencies**

State Foresters were also asked to indicate how much their agency *should* use the various formats of education, outreach, and communications media. Their preferred media, for the most part, matches the formats that the general public uses to obtain information about forest-related issues. The Internet is the top medium in this ranking: all State Foresters (100%) indicate that their agency should use the Internet *frequently* (Figure 5.12). Also high on the list is an e-mail newsletter, which also would tap into those people using the Internet. News releases and newspapers are also fairly highly ranked, which is commensurate to how the general public obtains information.

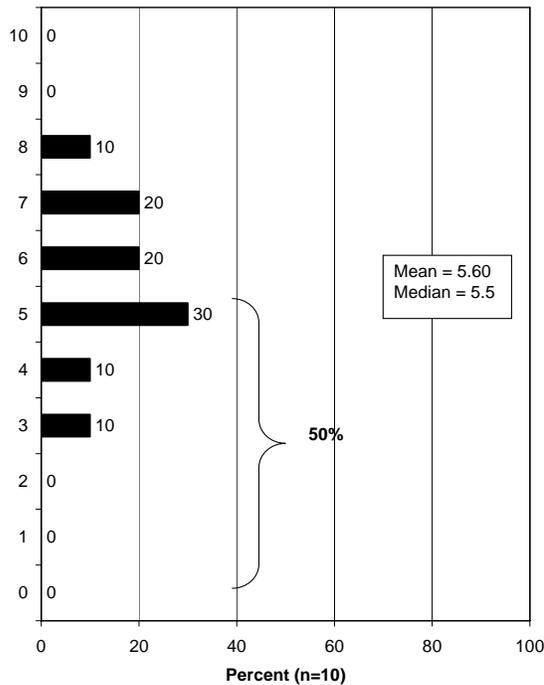
**Percent who indicated that they or their organization should use the following formats for education, outreach, and communication to the public on private forest stewardship frequently.  
(State Foresters.)**



**Figure 5.12. Formats of Media That Foresters Think Should Be Used Frequently**

Also pertinent to sources of information are some other questions from the survey of State Foresters. One question simply asked Foresters to rate the overall quality of their agency's efforts to educate the public on private forest stewardship. Figure 5.13 shows that State Foresters think that there is room for improvement: 50% give a rating of the midpoint or lower, and none give a rating of "9" or "10." Note that four respondents did not know what rating to provide on this question and are not included in the findings.

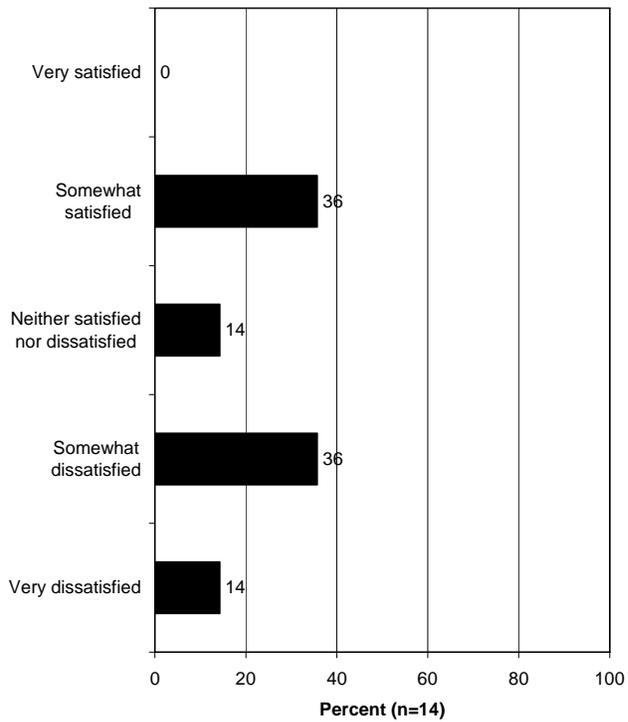
On a scale of 0 to 10, where 0 is poor and 10 is excellent, how would you rate the overall quality of your agency / organization's efforts to educate the public on private forest stewardship? (State Foresters.)



**Figure 5.13. State Foresters' Ratings of Overall Quality of Agency Efforts to Educate the Public on Private Forest Stewardship**

Another question in the survey of State Foresters asked them to indicate how satisfied they are with the amount of time and resources their agency spends on education, outreach, and communication on private forest stewardship. Unfortunately, the results are not positive: only 36% are satisfied (only *somewhat* satisfied, however, rather than *very* satisfied), while 50% are dissatisfied (and another 14% are neutral) (Figure 5.14).

**How satisfied or dissatisfied are you with the amount of time and resources your agency / organization spends on education, outreach, and communication on private forest stewardship? (State Foresters.)**



**Figure 5.14. State Foresters' Satisfaction or Dissatisfaction with the Amount of Time and Resources Spent on Communications Regarding Private Forest Stewardship**

## CHAPTER 6. IMPLICATIONS OF RESEARCH

### COMMUNICATIONS OVERVIEW

The discipline of communications is highly specialized and involves the creation of a strategic plan to convey specific messages to a targeted audience. Communications and outreach plans help agencies and organizations communicate concepts, ideas, and values to the public, their constituents, and stakeholders in a more compelling manner. A communications and outreach plan:

- Provides a foundation on which to base decisions and allocate resources for communications,
- Focuses an organization on where it wants to be and what communication strategies can help get it there,
- Provides a means of monitoring and evaluating communication efforts, and
- Improves the overall effectiveness and credibility of a program, agency, or organization.

Put simply, communications and outreach plans identify the terms and messages that resonate among specific target audiences, as well as the ways to convey those messages.

Communications is essential to the Forest Stewardship Project because the conservation and management of the nation's private forests depends upon Americans' knowledge of and positive attitudes toward the benefits of such lands, as well as their commitment to act on behalf of conservation and management issues. The key to providing this knowledge, fostering positive attitudes, and instilling this commitment is through effectively designed communications plans and programs.

### STAGES OF ATTITUDE FROM UNAWARENESS TO CONCERN TO ACTION

Another important aspect of communications pertains to the attitudes held by the audience. A starting point is the person who is totally unaware of an issue. In this situation, communications moves them from unaware to awareness. The next stage is to move from awareness to concern. The final stage is to move the person from concern to action. A communications strategy must consider which stage its audience is in.

### TYPICAL OBSTACLES TO SUCCESS IN COMMUNICATIONS

Before examining the specific communications research in this study, it is helpful to first examine some general principles for effective communications. Past research conducted by Responsive Management on natural resource issues suggests that the following are some of the major reasons why communications efforts have not been as successful as have traditional resource management programs:

1. Appropriate and adequate financial and personnel resources are *not* allocated to communication efforts. Many communication/outreach programs and efforts are underfunded from the start.
2. Efforts are *not* directly linked to the agency's or organization's highest priorities.
3. Biologists, scientists, and other agency and organization personnel are often *not* directly involved in setting outreach priorities and goals. Acceptance is *not* secured from the

entire agency or organization before the effort is undertaken, and, consequently, the initiative becomes isolated.

4. Specific outreach goals and program objectives are *not* specified or committed to in writing.
5. Target audiences are *not* identified; programs attempt to be all things to all people.
6. The target audience's knowledge level, opinions, and attitudes toward the specific outreach effort are *not* adequately researched; programs begin with little scientific understanding of the target audience.
7. Messages are *not* carefully crafted. Messages are *not* field-tested on the target audience. There are too many messages, and these messages tend to be too complex.
8. Appropriate media are *not* selected with the specific target audience in mind.
9. Efforts and initiatives are *not* implemented long enough. Efforts need time to work, and sometimes personnel get bored with the implementation phase, which may require repeating the same message over and over.
10. Efforts are *not* evaluated quantitatively in terms of outcomes, specified goals, and objectives.

## TARGETED MARKETING

Research shows that how people relate to forests, natural resources, and land management is affected by a variety of factors: gender, age, ethnic background, income, level of education, place of residence, knowledge of the issues, and a variety of other personality factors. It is clear that information and outreach efforts regarding the Forest Stewardship Project must target specific groups with specific messages. There is no such thing as a "general public." A list of one's publics is important and helpful in identifying one's place in a particular market.

Subdividing a heterogeneous public into smaller, more homogenous subsets based on one or more variables, such as education level, gender, age, type of wildlife activity enjoyed, is known as market segmentation. Once different audiences are understood, programs can be developed and tailored to each group—the essence of targeted marketing. Targeting also increases outreach effectiveness by making it more practical to use different strategies to meet the needs of different audiences.

## WORDS, TERMS, AND MESSAGES

Another important part of a communications strategy is understanding public opinion and attitudes and the ways that people react to certain words, terms, and messages. Understanding public opinion and how they will react to a message is vital when developing programs and outreach efforts. For instance, past research suggests that the public reacts differently to the word "conservationist" than it does to the word "environmentalist."

## MEDIA FOR COMMUNICATIONS

The final part of a communications strategy discussed is the media used for communications. This includes the physical format of the media (e.g., the Internet, print media) and the perceived source of that information (e.g., a government agency, a not-for-profit organization).

## PRACTICAL APPLICATION OF THE FINDINGS OF THE RESEARCH

The concepts in the sections above are combined in the practical application of the findings. Each of the bulleted items that follow are synthesized from the combined findings of the research.

- **In broad terms, forest stewardship should find a receptive audience, as the large majority of Northeastern Area residents hold positive attitudes about forest stewardship.**
  - With 77% of Northeastern Area residents giving a high rating (an “8” or higher on a “0” to “10” scale) to the importance that stewardship of privately owned forests should be, it would appear that there is a receptive audience to the message of forest stewardship. Only a small percentage—no more than 23%—needs to be moved into the “concerned” group. For that group who need to be moved into the realm of the concerned, men are more likely than women to give a low rating. Additionally, the lower education group is also more likely to give a low rating.
  - Likewise, with 59% of residents giving a high rating to the importance of privately owned forests to overall forest health and forest quality in their state, it again appears that there is a receptive audience to forest stewardship. Nonetheless, the data suggest that establishing the connection between *privately owned forests* and *overall forest health* is necessary, which will be discussed further on.
  - Also recall that 70% give a high rating of the importance of privately owned forests to the ecosystem of the state, more evidence of a widely receptive audience for forest stewardship.
  
- **Despite the receptive audience for forest stewardship, the data suggest that establishing the connection between *privately owned forests* and *overall forest health* will garner an even greater audience.**
  - While the evidence suggests that there is a wide audience for forest stewardship in general terms, there are some people who are rating the importance of stewardship of privately owned forests high but *not* rating the importance of privately owned forests to overall forest health high. In short, they are not making the connection between privately owned forests and overall forest health (77% give a rating of how important stewardship of privately owned forests should be, but only 59% give a high rating to the importance of privately owned forests to overall forest health in their state).
  - Also, Northeastern Area residents are split regarding the connection between stewardship of privately owned forests and their own *personal health and well-being*. While 56% give a high rating to the importance of privately owned forests to their *personal* health and quality of life, this leaves a substantial percentage who do not give it a high rating.

- In the focus groups, some participants had to be reminded that they benefit from privately owned forests, with typical comments being, “Oh yeah. I guess I do benefit from clean air.” Other reactions simply substituted clean water or lumber for their homes in that statement in their being reminded of the benefits they derive from privately owned forests.
- **Also in broad terms, emphasizing the ecological and somewhat intangible benefits of privately owned forests should resonate, including clean air, clean water, and fish and wildlife habitat. In general, ecological messages are rated higher by Northeastern Area residents than are messages that emphasize human benefits.**
- Clean water and clean air as benefits of privately owned forests resonated well in the surveys as well as in the focus groups. Recall that of a list of 8 potential benefits of privately owned forests, the top-rated benefit was clean air. Note that clean air as a benefit that resonates is undervalued by State Foresters and Committee members: they did not rate clean air commensurate with the general population’s ratings of that benefit.
  - The aforementioned list that had clean air at the top also had in its top tier clean water and fish and wildlife habitat. These resonated better than did recreational benefits, timber and lumber, and other forest products.
  - Another demonstration of the resonance of ecological values is in the differences in percentage who give high importance ratings to two questions. Residents’ ratings of the importance of privately owned forests to *overall health and quality of forests in their state* lag behind residents’ ratings of the importance of privately owned forests for the *ecosystem in their state*. On the former question, 56% give a high rating to the importance of privately owned forests to *overall forest health*, while on the latter question 70% give a high rating of the importance of privately owned forests to the *ecosystem* of the state.
- **Water resonates well. The benefit of clean water is highly rated. Messages encouraging support of forest stewardship that include water themes, for the most part, do well.**
- A list of 14 statements as reasons to support stewardship of privately owned forests was read to Northeastern Area residents, and 3 of the top 4 pertained to water:
    - 1st: The Northeast contains more than 20% of the world’s fresh surface water and 84% of the nation’s fresh surface water.
    - 2nd: Forests protect drinking water, filter pollutants, and hold water in forest soils.
    - 4th: In the Northeast, more than 52 million people depend on water supplies that are largely protected by forested lands.
  - It is worth noting that State Foresters’ ratings of agency performance overall (each Forester rated only his own agency) in addressing clean water as a benefit of privately owned forests was quite low, suggesting that their agency’s performance in getting the clean water message across needs to be improved in general.
- **Encouragement to become involved in or support forest stewardship based on appeals to help threatened and endangered species resonates well.**
- This is an ecological value that resonates well. In the list of 14 messages that were tested, third in the ranking is that “private land serves as critical habitat for many of the nation’s endangered species,” which reflects an ecological value.

- **That forests be *healthy* resonates better than that forests be *productive*.**
  - In the list of seven characteristics that forests should be, that forests be healthy was the top-ranked item, and that forests be productive was the lowest ranked.
- **The above finding notwithstanding, prompting people to become involved in forest stewardship by saying that the forests in their state are *not healthy* will lack resonance with most people.**
  - An overwhelming majority (80%) of residents think the forests in their state are healthy, so pleas based on the forest being unhealthy will not resonate well. Furthermore, the crosstabulations found no marked difference in ratings of importance of stewardship based on a division into groups based on opinions on the health of the forest anyway. In other words, thinking the forest is unhealthy is not a prerequisite of being concerned, and most people think the forests in their state are healthy.
- **The term, *forest stewardship*, has a positive connotation to the vast majority of Northeastern Area residents. In an open-ended question, only 1% give a negative reaction. However, about a quarter of people (26%) do not know its meaning.**
  - While the news is good that reactions are mostly positive, there exists a substantial portion of the populace that does not know the word. Note that a danger in not getting to these people is that whoever does get to them works with a blank slate in defining the term to them and could set a definition that does a disservice to the Forest Stewardship Project.
- **The term, *sustainable management*, had a mixed reaction. There are some problems with using the term, with some people *not* holding a positive view. It is probably useful to subtly define it when using it or to include words that put the term into context and allow people to get the meaning.**
  - While the solid majority of Northeastern Area residents (66%) have a positive reaction to the term, *sustainable management*, there are some with a negative reaction (5%) and a sizeable percentage who had a neutral reaction (25%) or do not know (3%)—making about a third of respondents who do *not* have a positive reaction.
  - More educated people react better to the term than do those in the lower educational strata.
  - Other demographic groups who are more likely to *not* have a positive reaction than the population as a whole include women and younger people.
- ***Balance* resonates well, particularly in discussions of natural resources. In this case, people, for the most part, want to see a balance of uses and a balance between conserving the forests and using them.**
  - Rather than want to see the forests preserved, with no use made of them, the general public appears to want to see conservation with some wise use. A key component of talking about the Forest Stewardship Project is that the general public thinks that the program allows use of the forests. While economic messages do not resonate well compared to ecological messages in encouraging support of forest stewardship, people nonetheless want to see the forests used. There is no wholesale opposition to using

forests for timber production, although the focus groups suggested that clear cutting is not well supported.

- **While the word, *conservation*, resonates well, it is important that people do *not* perceive of the program as completely banning use of the forests. Again, *balance* works well as a corollary concept with *conservation*.**
  - Although *conservation* resonates well, many people expressed concern that conservation not become a call for absolutely no use of forests.
  - Although not directly assessed in this survey (because Responsive Management has already done so in other studies), *conservationist* has a better connotation among the general public than does the *environmentalist*. Steer clear of using the latter term, which has become associated with extremism and with disallowing any use of natural resources.
  
- **An interesting nuance of *privately owned* as opposed to *private* was raised in one of the focus groups. Use of *privately owned* may be better than *private*, the latter term having an elitist (in the negative way) connotation.**
  - As a focus group participant indicated, the former is benign, while the latter seems to imply a rich person owning his own land to which he scrupulously restricts access.
  
- **Economic messages do not do well, nor do economic issues appear to greatly affect the general population's feelings about forests.**
  - Of the 14 messages previously discussed that were posited as possible reasons for supporting the stewardship of privately owned forests, low to the middle in the ranking were those that pertained to economics. These include:
    - Nearly a quarter of all wood produced in the U.S. comes from the Northeast. (Low ranked.)
    - Forest-related jobs rank in the top 10 in economic importance in every state in the Northeast. (In the middle of the ranking.)
  - An interesting crosstabulation of responses to the question about the portion of rural manufacturing jobs associated with forests and the question about ratings of the importance of stewardship of privately owned forests found no correlations where, intuitively, one might think there should be. First of all, the overwhelming majority of Northeastern Area residents underestimate the portion of rural manufacturing jobs that are related to forests. However, they are the group giving higher ratings to the importance of the stewardship of privately owned forests, whereas one might think the people who properly estimate or overestimate the importance of forests to rural manufacturing would value forest stewardship more. This was *not* the case. In other words, the study did *not* find that people who value the economic importance of privately owned forests to be more likely to value the stewardship of privately owned forests.
  
- **The word, *investment*, does not resonate well.**
  - A list of five things for which privately owned forests are important was read to Northeastern Area residents (e.g., privately owned forests are important for wildlife). Ecological values are at the top (wildlife, habitat), above “an investment in the future.” While “investment” is not in the lower end of the ranking, it is anemically received.

- The focus groups suggested some ambivalence about the word, “investment.” Focus group participants tended to think of the word as vague or meaningless without qualifiers with it. An investment for whom? The word also had a somewhat negative connotation when it was thought to be an investment designed for a profit. An investment for an altruistic reason was better, but the word does not have a ready association with altruism.
- **The words, *conserve* and *preserve*, are not perceived in the same way as they are among land-use professionals. These words should not be used in precise ways in generalized outreach materials without being defined.**
  - In the focus groups and survey of Northeastern Area residents, some people thought that the two words were essentially the same. Others had completely opposite views from one another regarding their meanings. Overall, there was no consensus in the meanings, and the words are open to wide interpretation because of this. In generalized communications, it would probably be best to *not* use them in a precise, land-use sense.
- **In general, negative messages as a prompt to encourage people to support forest stewardship do not resonate well. Use positive messages as reasons for engaging in forest stewardship.**
  - The plea to participate in forest stewardship because there are not enough forests did not resonate. Messages that discussed how urban sprawl will result if forest stewardship is *not* practiced did not do well, in other words, “bad things will happen if...” type messages did not resonate well.
- **An important point in discussing words and terms that resonate relates to tract size to be considered a forest. The term, *forest*, does not properly convey the meaning of forest as thought of by the NAASF. It appears that the NAASF’s threshold is smaller than the general public’s threshold. If the terms, *woods* or *woodlot*, were worked into messages about forest stewardship, the messages may resonate with more people.**
  - Among survey respondents in the resident survey, the median tract size threshold before a tract can said to be a forest is 40 acres. Furthermore, only 31% of people think that a tract size of 20 acres would be large enough to be considered a forest, while 40% did not think it to be large enough (the remainder saying “don’t know”). Obviously, using the term, *forest*, will exclude many people from the conversation who should be included.
  - *Woods* and *woodlot* were both terms that are more inclusive to the locations of interest to the Forest Stewardship Project. The bottom line is to encourage people to think in smaller terms.
- **Stating facts of ownership or facts about the amount of the Northeastern Area that is forested do not resonate as reasons for supporting stewardship of privately owned forests.**
  - Of the 14 messages previously discussed that were posited as possible reasons for supporting the stewardship of privately owned forests, low in the ranking were those that stated facts about forests or forest stewardship. These include:
    - More than 90% of forests in the Northeastern and Midwestern U.S. are non-federal. (This was the lowest ranked statement.)

- The Northeastern and Midwestern U.S. have one of the largest concentrations of privately owned forests in the world, with 130 million acres of privately owned forest.
- Related to facts is the simple finding that many people do *not* know much about forests in the Northeastern Area and forest stewardship in general. For instance, few people were absolutely sure that the Northeast is the most forested part of the nation. However, there was no correlation to knowing this fact (as well as others) and holding positive attitudes toward forest stewardship. For this reason, factual knowledge is not a very important message in this regard.
- **There are very specific findings regarding audiences that would be more receptive to forest stewardship. One important target market consists of those who participate in outdoor recreation. It is important to reach outdoor recreationists because they often have a connection to forests and they are more likely to support forest stewardship than are those who do not participate in outdoor recreation.**
  - A large percentage of the populace hikes and views scenery and wildlife. This group also was correlated with holding favorable views of forest stewardship, suggesting that they would be more likely to become involved in or support the Forest Stewardship Project.
  - Another group of outdoor recreationists consists of those who do more active sports than hiking, such as paddling or horseback riding. This group, too, shows a higher likelihood to support forest stewardship, compared to those who do not participate in these activities.
- **Another important target market consists of those who have visited a forested area, as these people are more likely to hold favorable attitudes toward forest stewardship than are those who have not visited a forested area. Fortunately, the overwhelming majority of people have visited a forested area.**
  - With 81% of residents saying that they have visited a forested area in the previous 2 years, the target market is large. These are people predisposed to supporting forest stewardship, so the effort would be to move these people from awareness to concern or from concern to action. On the other hand, 19% of people are disconnected to forests, indicating that they did *not* visit a forested area in the previous 2 years. These people will need to be moved from being unaware to awareness and then to concern.
  - Older respondents are less likely than younger respondents to have visited a forested area. Likewise, women are less likely to have visited a forested area compared to men, and those in the lower educational strata compared to those in the higher strata are less likely to have visited a forested area.
- **In looking at those groups most receptive to the idea of forest stewardship, residents of rural areas or small cities/towns are more likely to rate the importance of stewardship of privately owned forests high, compared to urban and suburban residents.**
  - Perhaps it was intuitive that predominantly rural people will place more importance on forest stewardship. This finding verifies that intuition.

- **Another group that would be receptive to receiving information is *new* landowners. In the focus groups, these people appeared to lack the experience of managing their own land and appeared to be open to advice.**
  - In general, the focus groups found that new landowners would accept advice. Meanwhile, more established landowners more often tended to think that they did not need advice.
  
- **Several groups appear to need more effort devoted to them vis-à-vis outreach and education than is currently being devoted to them. In particular, the data suggest that land developers, the business community, group landowners, college educators, and legislators were all groups to which more effort should be devoted. A secondary list includes college students, landowners associations, and residents within 25 miles of a designated forest.**
  - The analysis included a comparison of two series of questions asked of State Foresters. The first question presented them with a list of groups of people and asked them to rate how much of a priority each group is in current outreach efforts and then how much of a priority each group should be in outreach efforts. The analysis that looks at the results together can suggest where current efforts meet the perceptions of where the priorities should be and where the perception of priority is much greater than the current priority. In this analysis, the priority given to those five groups is not commensurate with the priority that State Foresters think should be given.
  - A couple other groups also do not have the priority given to them that State Foresters desire, but not to the extent of those five aforementioned groups. These other groups that are somewhat out of line with desired priorities include college students, landowners associations, and residents within 25 miles of a designated forest.
  
- **Another important aspect of communications is the entity that delivers the message. Take advantage of the high credibility of government agencies (while simultaneously taking care to *not* brand the Project as a government *mandate* or government *intrusion*). Government sources (despite some anti-government feeling that exists in this country) are widely used—the most used source for forest-related information in the survey of residents—and they are, for the most part, considered credible.**
  - In an open-ended question regarding where residents obtained information about forests and forest-related issues, the top source was government agencies, with 36% of people saying that they use them.
  - The survey asked about the credibility of eight entities that provide forest-related information. The top-ranked ones were the U.S. Forest Service, a forester with the U.S. Forest Service, and then the State agency most responsible for forest management. These were all more credible than a forest products company, the television news media, or a city/town newspaper.

- **Regarding using the government as a vehicle to disseminate information, note that *local* government is received better by people than is the state government or the federal government. Therefore, emphasis should be placed that the government involvement is local. (Even if a state agency employee is the contact for the Project, the emphasis should be that this person knows *local* conditions and works *locally*.)**
  - Although the quantitative survey showed fairly positive results regarding credibility of government sources of information, the focus groups were rife with anti-government feelings or at least ambivalent feelings about the government, particularly government entities that appear to be disconnected from local issues. One focus group participant rated the government source less credible the farther it got away from local government, saving the worst ratings for the federal government.
  
- **While government sources are useful because many people already use them for information, and those sources should be used to help disseminate information, it is important to break any perception that participation in the Forest Stewardship Project results in the government swooping down to take control of the land or that participation involves burdensome *mandates*.**
  - While the focus group participants, for the most part, received the forest stewardship message positively, there were some who questioned whether it resulted in loss of control of the land or whether it involved lots of mandates. People reacted quite negatively to the thought that they would no longer have decision power over their own land. They seemed to be appeased in learning that the Project is voluntary, but their leap to assume that the Project involved heavy handed mandates suggests that this assumption will need to be countered. In other words, people assume the worst regarding mandates unless informed otherwise.
  
- **Another bit of misinformation that may need to be countered is that the Forest Stewardship Project is anti-logging.**
  - In the focus groups, many people jumped to the conclusion that the Project is nothing but a preservation effort that is anti-logging. While some environmental extremists may be completely anti-logging, most of the people in the focus groups (this aspect was not tested in the survey) were sympathetic with forest-related industry and wanted the forests to be used. It is important that the Project not be erroneously branded as an anti-logging program. (Although as a reason for forest stewardship, remember that ecological reasons resonated better than did economic reasons.)
  
- **While a very low percentage rate the NAASF as not at all credible as a source of information, there is still some room for improving the NAASF's credibility, which involves an effort to make more people aware of the NAASF and to make more people consider it credible.**
  - The credibility of the NAASF is lower than that of the U.S. Forest Service and the state agency most responsible for forest issues. Some of the low percentage rating the organization credible is caused by the relatively substantial percentage answering "don't know" regarding the NAASF, leaving fewer people to give a positive rating (of all the entities tested, the highest percentage not knowing what credibility rating to give was for

the NAASF—fully 35% did not rate its credibility). It is important to move these 35% of people into the realm of thinking that the NAASF is credible.

- Another aspect of credibility pertains to those who think the organization is credible, but only *somewhat* credible rather than *very* credible. In total, 27% of Northeastern Area residents in the survey give a rating of only *somewhat* credible or *not at all* credible (this last group, fortunately, small), meaning that they have some credibility concerns.
- **A finding related to credibility is that the State Foresters do *not* rate the quality of information that their agency provides particularly high. The reasons for this should be further explored, and remedial actions should be taken to improve the outreach materials.**
- In rating the quality of information that their agency provides on a scale from “0” to “10,” with “10” being the highest quality, *none* of the State Foresters rated the information that their agency provides as a “9” or a “10.” These are certainly anemic ratings that should be improved.
- **While television is an expensive medium to use for messaging, it is an important source of information about forests for about a fourth of Northeast Area residents. Additionally, print media is also still important for about the same amount of people. Therefore, although the Internet may be the most cost-effective way to disseminate information, these more expensive formats should be considered. Note that older people and more educated people (who are otherwise more disposed to support forest stewardship) are the most likely to use print media.**
- In the survey, 24% of respondents indicated using television for information, while 23% use newspapers and 21% use magazines. Because of this fairly robust use, explore using these media, when it is cost-effective to do so.
- **Email newsletters may be underutilized as a outreach tool.**
- In the survey of State Foresters, a large majority (79%) say that email newsletters should be used frequently, but only 29% say that they are currently used frequently.

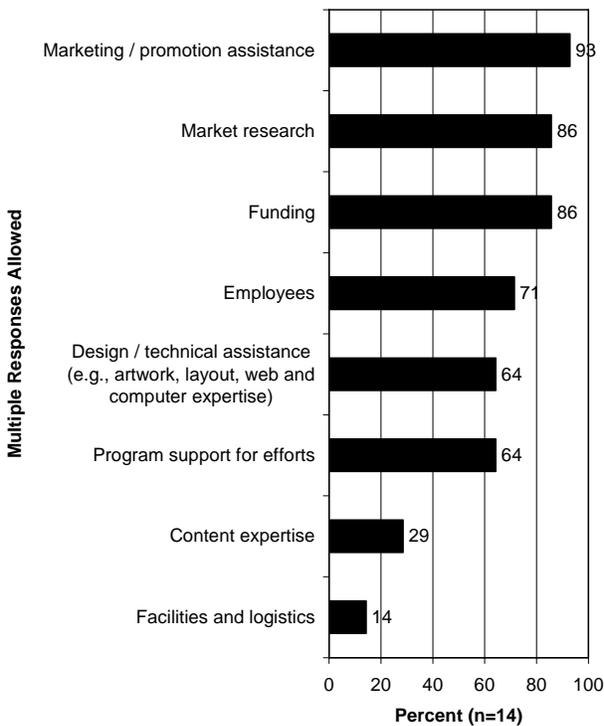
## ADDITIONAL RESOURCES NEEDED FOR OUTREACH

It is worth noting at this juncture that State Foresters in their survey give anemic ratings to the efforts of their agency to inform people about forest stewardship. Indeed, 50% of them gave a rating of the midpoint or lower in rating their agency’s efforts, and none of them gave a rating of “9” or “10.” Additionally, none were *very* satisfied with agency time and resources devoted to education, outreach, and communication on private forest stewardship. These findings certainly suggest that additional resources may be needed.

This final section of the chapter addresses agency and organization needs. The survey of State Foresters and Committee Members included the question, “What additional resources does your agency/organization need to be able to provide more effective education, outreach, and communication on private forest stewardship?” Nearly all State Forester (93%) indicate needing marketing and promotion assistance (Figure 6.1). Also high on the ranking are market research (86%) and funding (86%), followed by more employees (71%), communications design and

technical assistance (64%), and program support (64%). Low on the ranking are content expertise (only 29%; the rest feeling confident in their knowledge) and facilities and logistics (only 14%).

**What additional resources does your agency / organization need to be able to provide more effective education, outreach, and communication on private forest stewardship? (Respondents checked all that applied from list.) (State Foresters.)**



**Figure 6.1. State Foresters Survey: Additional Resources Needed by Agencies and Organizations**

## CHAPTER 7. BASELINE DATA AND MEASURING PROGRESS

Some of the questions in the survey can be used as a baseline against which to measure future progress in communications. In short, a messaging theme meant to change people's attitudes toward a certain aspect of stewardship of privately owned forests could be, in part, assessed by questions that pertained to that attitude. For example, if a message theme was to encourage people to think in smaller terms regarding what would qualify as a forest, the question from this survey, *How large should a tract of land be to be considered a forest?*, could be asked in a future survey and used in a trends analysis to help assess whether the general public's size threshold for defining a forest has changed.

Likewise, many of the series of questions used in the general population survey could be used to help assess any changes in the priorities people place on stewardship of privately owned forests. For this reason, the data in this report should be used as a continuing resource as a baseline, as well as to explore nuances of attitudes towards various messages that the reader may see that are not specifically pointed out in the text.

### FUTURE ASSESSMENTS AND USE OF SURVEY INSTRUMENT

If future assessments are planned, it is important that survey questions are asked consistently and that wording of questions does not change, except in limited circumstances to make the question applicable to a later date. An abridged version of the general population survey is included below. It has had proprietary code statements and error checkers removed and represents just the questions, which is why some question numbers are skipped. The order of the questions in series, meant primarily for assessing each question relative to the others in that series, were randomized so that respondents received questions in different orders, thereby eliminating "order bias" on these questions. Order bias is the effect that one question has on subsequent questions. Questions in series are enclosed by sets of lines, as follows:

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Introduction to series of questions.

Question one of series.

Question two of series.

Question three of series.

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## GENERAL POPULATION SURVEY QUESTIONNAIRE

[An introduction is read to the potential respondent, and some “screening” questions are asked to ensure that the respondent meets the criteria to be interviewed.]

16. I'd like you to tell me if you have participated in any of the following activities in the past 2 years. How about...?

- Hiking
- Camping
- Mountain biking
- Horseback riding
- Fishing
- Hunting
- Wildlife viewing
- Viewing scenery, such as waterfalls or overlooks
- Water sports, such as canoeing, kayaking, tubing, or rafting
- Conservation or land improvement activities, such as litter pick-ups or planting trees

17. Next, I'd like to know if you have visited a forested area, including just woods, for any purpose in the past 2 years?

18. Was that mostly for work, for recreation, or for both about equally? (Were your visits to forests or woods in the past 2 years mostly for work, for recreation, or for both about equally?)

19. In general, would you describe forest lands in [respondent's state of residence] as healthy or unhealthy? [In this question, the interviewer inserts the respondent's state of residence.]

21. How large should a tract of land be to be considered a forest? (IF ASKED: What your concept of the term, "forest," is.)

26. Please tell me if you think each of the following qualifies as forest land. How about...? (IF ASKED: Small or large tract are as they think the terms apply.) (READ LIST)

- A state or national park
- A small wooded lot next to a residential area
- A large privately owned tract with a dense growth of trees
- A small privately owned tract with a dense growth of trees

27. Forests may be publicly or privately owned or managed, and there are privately owned forests in [respondent's state of residence] and throughout the Northeastern and Midwestern states. Also, for the remainder of the questions, when I say “forest,” I am including what some people refer to as “woods.”

29. About what percentage of forest land in the Northeastern and Midwest states do you think is privately owned?

32. About what percentage of rural manufacturing jobs in the Northeastern U.S. do you think are forest based?

35. Please tell me if the following statement is true or false: The Northeastern U.S. is the most forested part of the nation in the percentage of the land that is forested.

- You're absolutely sure it is true
- You're pretty sure it is true
- You don't know
- You're pretty sure it is false
- You're absolutely sure it is false

36. In your opinion, how do privately owned forests differ from publicly owned forests? (OPEN-ENDED; RECORD ANYTHING RESPONDENT SAYS)

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37. The next set of questions are about *privately* owned forests, not public forests. (IF ASKED: Corporate ownership is still considered privately owned.)

38. In your opinion, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important, how important are privately owned forests to the overall health and quality of all forests in [respondent's state of residence]?

42. How important are privately owned forests to the overall ecosystem of [respondent's state of residence]? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

45. How important are privately owned forests to your personal health and quality of life? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

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48. Next, please tell me how important you think privately owned forests are for providing the following. Again, please remember that we are talking about privately owned forests, not publicly owned forests like parks or national forests.

50. What about for providing clean air? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

53. What about for providing clean water? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

57. What about for providing fish and wildlife habitat? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

60. What about for providing timber and lumber? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

63. What about for providing products other than timber and lumber, such as paper, cardboard, mulch, and food? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

66. What about for providing recreation areas? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

69. What about for providing places to view wildlife or enjoy nature? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

72. What about for providing educational opportunities? (On a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)

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75. What do you think of when you hear the term "forest stewardship"? (OPEN-ENDED; RECORD ANYTHING RESPONDENT SAYS)

76. How much would you say you know about forest stewardship?

- A great deal
- A moderate amount
- A little
- Nothing at all

77. Forest stewardship refers to efforts to sustain, improve, and protect forests.

79. In your opinion, how important should forest stewardship be for private landowners in [respondent's state of residence]? (On a scale of 0 to 10 where 0 is not at all important and 10 is extremely important.)

82. In your opinion, is stewardship of privately owned forests more important, just as important, or less important than stewardship of publicly owned forests?

83. What do you think is the main difference between the terms "preserve" and "conserve"? (OPEN-ENDED; RECORD ANYTHING RESPONDENT SAYS)

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84. For these questions, we'll use a 0 to 10 scale, where 0 is not at all important and 10 is extremely important.

86. How important are privately owned forests in [respondent's state of residence] for habitat?

89. How important are privately owned forests in [respondent's state of residence] for pollution reduction?

92. How important are privately owned forests in [respondent's state of residence] for wildlife?

96. How important are privately owned forests in [respondent's state of residence] as an investment in the future?

99. How important are privately owned forests in [respondent's state of residence] as a place for children to learn?

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103. How important is it that privately owned forests in [respondent's state of residence] be healthy?

106. How important is it that privately owned forests in [respondent's state of residence] be protected?

109. How important is it that privately owned forests in [respondent's state of residence] be peaceful?

112. How important is it that privately owned forests in [respondent's state of residence] be productive?

115. How important is it that privately owned forests in [respondent's state of residence] be sustainable?

118. How important is it that privately owned forests in [respondent's state of residence] be conserved?

121. How important is it that privately owned forests in [respondent's state of residence] be preserved?

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124. When I say, "sustainable management," do you have a positive, neutral, or negative reaction to the term?

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125. Now I'm going to read you a list of reasons that people may or may not think are convincing reasons for stewardship of privately owned forests. For each reason, please tell me how convincing it is to you as a reason for protecting, improving, restoring, and sustaining privately owned forests. (On a scale of 0 to 10, where 0 is not at all convincing and 10 is an extremely convincing reason.)

127. How about that all natural resources are valuable?

130. How about that there is not enough privately owned forest land currently protected and maintained?

133. How about that we have an obligation to society to protect and sustain forests, including privately owned forests?

136. How about that we do not have the right to destroy resources that our children and future generations will depend on?

139. How about that privately owned forests are God's creation or work?

142. How about that privately owned forests help strengthen the economy through wood, paper, and other industries?

145. How about that privately owned forests provide habitat for fish and wildlife?

148. How about that privately owned forests help produce clean water and oxygen?

151. How about that privately owned forests are an important part of the ecosystem?

154. How about that having healthy privately owned forests allows us to enjoy the beauty of nature?

157. How about that privately owned forests enhance the quality of life in [respondent's state of residence]?

160. How about that privately owned forests enhance opportunities for outdoor recreation?

163. How about that we are running out of natural resources that privately owned forests help provide?

166. How about that the benefits of privately owned forests, from providing clean natural resources to scenic landscapes, contribute to your personal health?

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169. If you heard the following messages, how effective do you think each would be at increasing your support of stewardship efforts for privately owned forests? Use a scale of 0 to 10, where 0 is not at all effective and 10 is extremely effective.

171. More than 90% of forests in the Northeastern and Midwestern U.S. are non-federal.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

174. The Northeastern and Midwestern U.S. have one of the largest concentrations of privately owned forests in the world, with 130 million acres of privately owned forest.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

178. The Forest Stewardship Project helps keep forests from being cut down for development.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

181. Privately owned forests provide benefits even to those who do not own the land.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

184. Private land serves as critical habitat for many of the nation's endangered species.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

187. About 17 million acres of privately owned forest land in the Northeastern and Midwestern U.S. are open to the public for outdoor recreation.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

190. Forest-related jobs rank in the top 10 in economic importance in every state in the Northeast.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

193. Nearly a quarter of all wood produced in the U.S. comes from the Northeast.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

196. In the Northeast, more than 52 million people depend on water supplies that are largely protected by forested lands.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

199. Forests protect drinking water, filter pollutants, and hold water in forest soils.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

202. The Northeast contains more than 20% of the world's fresh surface water and 84% of the nation's fresh surface water.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

205. The Northeastern U.S. lost about 3.7 million acres of forest land to development throughout the 1900s.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

208. The connection between forests and rivers is like between father and son: No forests, no rivers.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

211. Keeping forests as forests is important.(How effective do you think this message would be at increasing your support of stewardship efforts for privately owned forests?)

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216. What types of information sources do you use about forest-related issues? (IF NECESSARY: The type of medium, such as Internet or printed stuff or TV.) (OPEN-ENDED)

220. What organizations or agencies provide that information (about forest-related issues)? (OPEN-ENDED)

224. Next, I'm going to name some sources of information about forest issues, and I'd like you to say how credible each source is.

[Each question used the response set shown below.]

- Very credible
- Somewhat credible
- Not at all credible

226. How about the U.S. Forest Service? (How credible is this source of information about forest issues?)

227. How about the Northeastern Area Association of State Foresters? (How credible is this source of information about forest issues?)

228. How about a forester with the U.S. Forest Service? (How credible is this source of information about forest issues?)

229. How about a forester with a state university? (How credible is this source of information about forest issues?)

230. How about the [the respondent's state agency most responsible for forests is read to respondent]? (How credible is this source of information about forest issues?)

231. How about a forest products company? (How credible is this source of information about forest issues?)

232. How about television news media? (How credible is this source of information about forest issues?)

233. How about a city or town newspaper? (How credible is this source of information about forest issues?)

235. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area *not* on a farm or ranch?

236. Do you own land that is or could be considered forest land?

237. About how many acres of forest land do you own? (IF ASKED: If you own multiple parcels or tracts of land, please tell me the total number of acres that are or could be considered forest land.) (ASKED ONLY OF THOSE WHO OWN LAND THAT IS OR COULD BE CONSIDERED FOREST LAND.)

242. Do you or any family members in the Northeastern or Midwest U.S. work in forestry, the wood products industry, or a related industry?

243. What is the highest level of education you have completed?

246. What races or ethnic backgrounds do you consider yourself? Please mention all that apply.

248. How long have you lived in [respondent's state of residence]?

251. May I ask your age?

257. Now I can tell you the answers to the questions I asked you about forest facts earlier if you are interested:  
 About 75%, or three-quarters, of forests in the Northeastern and Midwest states are privately owned.  
 About 50%, or about half, of rural manufacturing jobs in the Northeastern U.S. are forest based.  
 It is true that the Northeastern U.S. is the most forested part of the nation (as measured by the portion of the region that is forested).  
 If you are interested, we can provide you with the contact information for your state's forest agency and for forest stewardship programs in your state.

259. OBSERVE AND RECORD RESPONDENT'S GENDER.

## CHAPTER 8. METHODOLOGY

This section provides a more detailed explanation of the project methodology, an overview of which is included in the introduction of the report. As mentioned, the project data collection consisted of a series of four focus groups, a telephone survey of the general population, and a Web-based survey of State Foresters and Cooperative Forest Management Committee Members. Specific aspects of the research methodology are discussed below.

### FOCUS GROUP METHODOLOGY

#### Overview

Focus groups are non-directive group discussions that expose spontaneous attitudes of small groups. The focus groups for this study entailed in-depth, structured discussions with small groups, about 10 to 12 people, regarding various forest- and stewardship-related issues. The use of focus groups is an accepted research technique for qualitative research, and these focus groups provided a qualitative exploration of attitudes, opinions, perceptions, motivations, and constraints related to private forests and the Northeastern Area's Forest Stewardship Project.

An experienced, trained moderator (Mark Damian Duda, Executive Director of Responsive Management, or Martin F. Jones, Senior Research Associate with Responsive Management) led each focus group, as unobtrusively as possible, through a discussion guide and looked for new insights into why individuals felt the way they did about particular issues related to private forests and stewardship. The use of a discussion guide ensured consistency in data collection.

The focus groups in this study, as do all focus groups, called for small sample sizes. The conclusions rest on face validity and rely on the depth of analysis rather than the breadth of analysis. This focus group research, as does all qualitative research, sacrifices reliability or the ability to replicate results for the sake of increased validity.

#### Focus Group Locations

Focus groups were conducted in Chillicothe, Ohio, on November 15, 2010; Ellenville, New York, on November 15, 2010; Nashua, New Hampshire, on November 16, 2010; and Prairie du Chien, Wisconsin, on November 17, 2010. The locations for the focus groups were chosen based on several factors. The first was to ensure a wide geographic spread of participants within the Northeastern Area. The second factor was the existence of facilities and pools of potential focus group participants in various areas.

#### Focus Group Recruiting

Responsive Management used a multi-modal approach to the focus group recruiting. Advertisements describing the study and listing a contact number were placed in local newspapers in the communities of interest. Responsive Management also mailed letters to a random sample of listed households in the Northeastern Area with a brief description of the study and a toll-free number to contact the recruiting manager, and Responsive Management also contacted these potential participants by telephone. People interested in participating in the focus groups were given a brief summary of the focus group topics, were screened using a

screening questionnaire, and, if qualified, were confirmed for attendance. The screener ensured that the focus group participants met the established criteria set for the groups.

Confirmed focus group participants were e-mailed or mailed (by personal preference) a confirmation that included the date, time, and location of the focus group, as well as a map and directions to the focus group facility. Each participant was offered a reminder call the day before the focus group and were provided a telephone number for directions or last minute questions. To encourage participation, a monetary incentive was given to participants.

During the recruiting process, the focus group recruiting manager maintained a progress table for each focus group that included participant name, address, contact telephone number, and essential participant characteristics. The recruiting manager ensured that all confirmation e-mails or letters were sent promptly to participants and that reminder telephone calls were made, as necessary, the day before the focus group. Reminder calls and interaction with potential participants helped ensure their attendance, resulting in quality focus group participation.

### **Focus Group Discussion Guides**

The focus groups were conducted using a discussion guide that maintained consistency in the data collection. Responsive Management's researchers, in collaboration with NAASF staff, developed the discussion guide. The discussion guide included, but was not limited to, questions regarding top-of-mind issues, knowledge of private forests and their benefits, awareness of forest stewardship and the Northeastern Area's Forest Stewardship Project, and sources of information on forest issues. While the discussion guides provided a general framework for directing the content of the discussions, question order and phrasing were adjusted by the moderator according to the dynamics of the group discussions.

### **Focus Group Data Analysis**

Analysis of the focus groups was conducted through observation of the focus group discussions by the moderator (who compiled post-focus group notes) and reviews of the video and/or audio recordings. Thus the analyses were performed in three iterations: 1) the actual focus group observations, 2) review of video and/or audio recordings, and 3) the development of findings for this final report.

## **SURVEY METHODOLOGY**

### **Overview**

As mentioned, this project entailed two separate surveys: one of State Foresters and Cooperative Forest Management (CFM) Committee Members, and the other of residents of the Northeastern Area states (listed in Chapter 1 of this report). A Web-based application was used for the survey of State Foresters and CFM Committee Members, while telephones were selected as the preferred sampling medium for the survey of Northeastern Area state residents.

### **Questionnaire Design**

The survey questionnaires were developed cooperatively by Responsive Management and the NAASF, based on the research team's familiarity with forestry issues, as well as communications and messaging research. Responsive Management conducted pre-tests of the questionnaires to ensure proper wording, flow, and logic in the surveys.

### **Use of the Web Application for the Forester and Committee Member Survey**

The Web-based survey application was selected as the preferred sampling medium for these groups because of the convenience offered through the format and the universal access to computers among agency employees. The survey instrument was developed cooperatively by NAASF and Responsive Management based on the project objectives. Web survey data were collected between December 2010 and February 2011. Responsive Management obtained a total of 14 completed surveys from State Foresters and 14 completed surveys from CFM Committee Members, for a total of 28 completed surveys from the Web questionnaire.

### **Use of Telephones for the Northeastern Area State Resident Survey**

Telephones were selected as the preferred sampling medium for the survey of Northeastern Area residents because of the almost universal ownership of telephones (both landlines and cell phones were called). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling of the general population, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

### **Telephone Interviewing Facilities**

A central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of outdoor recreation and natural resources.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted a project briefing with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey questionnaire, reading of the survey questions, skip patterns, and probing and clarifying techniques necessary for specific questions on the telephone survey questionnaire.

**Interviewing Dates and Times**

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. Telephone survey data of the general population were collected between December 2010 and February 2011.

**Telephone Survey Data Collection and Quality Control**

The software used for the telephone survey data collection was Questionnaire Programming Language (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey questionnaire was programmed so that QPL branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection.

The Survey Center Managers and statisticians monitored the data collection, including monitoring of the actual telephone interviews without the interviewers' knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. The survey questionnaire itself contains error checkers and computation statements to ensure quality and consistent data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness. Responsive Management obtained a total of 4,186 completed interviews from among the general population of the Northeastern Area. The total sample size on some questions is less than 4,186 because the survey asked some questions only of specific respondents in the survey. In particular, this was done when a follow-up question did not apply to some respondents. For instance, only those who said they owned forest land were asked the follow-up question regarding the number of acres they owned.

**Survey Data Analysis**

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management.

On questions that asked respondents to provide a number (e.g., the number of acres of forest land they owned), the graph shows ranges of numbers rather than the precise numbers. Nonetheless, in the survey each respondent provided a precise number, and the dataset includes this precise number, even if the graph only shows ranges of numbers. Note that the calculation of means and medians used the precise numbers that the respondents provided.

**Nonparametric Analysis**

For this report, a nonparametric analysis examined how various responses to questions on the general population survey related to behavioral, participatory, and demographic characteristics.

Responses for selected questions were tested by means of z-scores for relationships to various characteristics (i.e., the characteristics as revealed by responses to other questions, including a series of demographic questions). A positive z-score means that the response and characteristic are positively related; a negative z-score means that the response and characteristic are negatively related.

The z-score shows the strength of the relationship between the characteristic and the response to the question. Those z-scores that have an absolute value of 3.30 or greater indicate a relationship that is so strong that it would happen by chance only 1 out of 1,000 times ( $p \leq 0.001$ ). Those z-scores that have an absolute value of 2.58 to 3.29 indicate a relationship that is so strong that it would happen by chance only 1 out of 100 times ( $p \leq 0.01$ ). Finally, those z-scores that have an absolute value of 1.96 to 2.57 indicate a relationship that is so strong that it would happen by chance only 5 out of 100 times ( $p \leq 0.05$ ).

The z-scores were calculated as shown in the formula below.

$$z = \frac{(p_1 - p_2)}{\sqrt{p(1-p) \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}}$$

where:

$n_1$  represents the number of observations in Group 1.

$n_2$  represents the number of observations in Group 2.

$p_1 = a/(a + b) = a/n_1$  and represents the proportion of observations in Group 1 that falls in Cell  $a$ . It is employed to estimate the population proportion  $\Pi_1$  (% of Group 1 who had specific characteristic).

$p_2 = c/(c + d) = c/n_2$  and represents the proportion of observations in Group 2 that falls in Cell  $c$ . It is employed to estimate the population proportion  $\Pi_2$  (% of Group 2 who had specific characteristic).

$p = (a + c)/(n_1 + n_2) = (a + c)/n$  and is a pooled estimate of the proportion of respondents who had specific characteristic in the underlying population.

(Equation from *Handbook of Parametric and Nonparametric Statistical Procedures*, 2<sup>nd</sup> Edition by David J. Sheskin. © 2000, Chapman & Hall/CRC, Boca Raton, FL.)

### Sampling Error

Findings from the telephone survey are reported at a 95% confidence interval (or higher). For the entire sample of Northeastern Area residents, the sampling error is at most plus or minus 1.51 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 1.51 percentage points of each other. Sampling error was calculated using the formula described in Figure 8.1, with a sample size of 4,186 and a population size of 94,309,283 adult residents of the Northeastern Area.

**Calculation of Sampling Error**

$$B = \left( \sqrt{\frac{N_p(.25)}{N_s} - .25} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)  
 $N_p$  = population size (i.e., total number who could be surveyed)  
 $N_s$  = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

**Note:** This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

**Figure 8.1. Sampling Error Equation**

To allow for many survey questions to be asked while still ensuring that the survey was not too long for any one respondent, the sample was split on some questions, with half of the sample getting one question and the other half getting another. The sampling error on half of the sample (i.e., with a sample size of 2,093) is 2.14 percentage points.

## **ABOUT RESPONSIVE MANAGEMENT**

Responsive Management is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Its mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing its in-house, full-service, computer-assisted telephone and mail survey center with 45 professional interviewers, Responsive Management has conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communications plans, need assessments, and program evaluations on natural resource and outdoor recreation issues.

Clients include most of the federal and state natural resource, outdoor recreation, and environmental agencies, and most of the top conservation organizations. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn, Texas Tech, the University of California—Davis, Michigan State University, the University of Florida, North Carolina State University, Penn State, West Virginia University, and others.

Among the wide range of work Responsive Management has completed during the past 20+ years are studies on how the general population values natural resources and outdoor recreation, and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of selected groups of outdoor recreationists, including anglers, boaters, hunters, wildlife watchers, birdwatchers, park visitors, historic site visitors, hikers, and campers, as well as selected groups within the general population, such as landowners, farmers, urban and rural residents, women, senior citizens, children, Hispanics, Asians, and African-Americans. Responsive Management has conducted studies on environmental education, endangered species, waterfowl, wetlands, water quality, and the reintroduction of numerous species such as wolves, grizzly bears, the California condor, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their memberships and donations. Responsive Management has conducted major agency and organizational program needs assessments and helped develop more effective programs based upon a solid foundation of fact. Responsive Management has developed websites for natural resource organizations, conducted training workshops on the human dimensions of natural resources, and presented numerous studies each year in presentations and as keynote speakers at major natural resource, outdoor recreation, conservation, and environmental conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts

surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management's research has been featured in most of the nation's major media, including CNN, ESPN, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front pages of *The Washington Post* and *USA Today*.

Visit the Responsive Management website at:  
**[www.responsivemanagement.com](http://www.responsivemanagement.com)**